Clarendon County School District Three
Technology Plan

Effective: July 1st, 2009 – June 30th, 2012

Abstract

To realize the benefits of technology, schools must develop a plan for integrating technology into the curriculum. An effective technology plan is based on the shared vision of educators, parents, community members, and business leaders with technological expertise. This ensures that technology strengthens existing curricula, supports meaningful education for all students, specifies how the technology will be funded, and how its use will be supported. East Clarendon District Three has created such a technology plan by outlining current and future technology usage and needs.

If you have any questions or need any additional clarification, please feel free to contact us:

East Clarendon District Three
1177 Atkinson Street
Post Office Drawer 270
Turbeville, South Carolina 29162
http://www.clarendon3.org

Phone: (843) 659-2188
Fax: (843) 659-3204
info@clarendon3.org

Please note the following:

- This document is organized using Outline format.
- Blue Text represent clickable Hyperlinks for easy navigation.
- Drop Shadowed Boxes represent quoted or copied text.
- This document was last updated on April 5th, 2010.

I verify that all above components for the Clarendon County School District Three Technology Plan have been addressed.

Dr. Connie J. Dennis
Superintendent

Signature: _____

Date: _____

Kevin B. Landers
Technology Director

Signature: _____

Date: _____

Contents

1 District Profile

Clarendon County School District Three has been serving the Turbeville, South Carolina area since its establishment in 1952. The district is a rural community on the north-eastern side of Clarendon County. Our district is the poorest, in assessed value, not only in Clarendon County but also in the State. There is no industry in the district to partner with. This leaves all the burden of support on the taxpayers. The value of a mill within this district is $7,885.26. This means citizens must pay a high tax levy for the support of education. Although the poorest in assessed value, the district is the richest in per capita wealth in the county among citizens.

Clarendon County is in the east central portion of the state and has a population of 33,339. Currently, unemployment rate for Clarendon County is 17.1%[1]. Of the county's adults 25 years and older, 33.9% have less than a high school education with 2,703 of those having only completed less than ninth grade. The total minority population in this district is 27%. Hispanic, Asian and Indian is 5%. The graduation rate for the district for last year was 74%.

Clarendon Country School District Three's Facts and Figures[2]:

District Office	1
Elementary School	1 (Walker Gamble Elementary School)
Middle/High School	1 (East Clarendon Middle-High School)
Employees	161
Instructors	87
Student Enrollment	1,256
Eligible for Free Lunch	48.2% (606 students)
Eligible for Reduced Lunch	7.6% (95 students)
English as a Second Language (ESL)	4%
District's Drop-out Rate	2.8% (2007-2008) 1.1% (2006-2007)
Current E-rate Discount	80.00%

[1] Based onGoogle's public data as of 2010-03-24: http://www.google.com/publicdata?ds=usunemployment&met=unemployment_rate&idim=county:CN450270&dl=en&hl=en&q=clarendon+county+unem

[2] District's enrollment is based on the 2009 135th day report.

2 Executive Summary

Since December 31st 2006, Walker Gamble Elementary School and East Clarendon Middle-High School have been accredited by the Southern Association of Colleges (SACS) and Schools Council on Accreditation and School Improvement. Walker Gamble Elementary School is a Title I school and has recently been identified as Needs Improvement.

East Clarendon Middle School has been receiving technical assistance funds for the past four years. East Clarendon Middle School obtained accreditation by Southern Association of Colleges (SACS) and Schools Council on Accreditation and School Improvement last year.

School representatives indicate that meeting the No Child Left Behind Adequate Yearly Progress is a constant worry. There is a need for more in-house staff development in standards-based instruction and coaching/modeling of best practices. More emphasis needs to be placed on utilizing software that increase proficiency in math, science, and social studies; however, reading continues to be a definite need for improvement across the district. Continued use of Accelerated Reader and associated MAPS testing will increase proficiency in all areas.

Several schools are interested in their own curriculum coach to assist with all content areas. All schools indicate a need for more teachers and assistants to serve in the classrooms and in the remediation roles during and after school hours. All schools want to increase parent involvement/participation. Schools have voiced a need for more leveled readers to include nonfiction for differentiated instruction, content novels, more participation in science lab activities, expanded career/technological opportunities, year-long English and math courses and flexible scheduling.

According to NCLB, teachers must be highly qualified by the end of the 2005-2006 school year. Currently, all but one of the district's core academic subject area teachers are highly qualified. Middle school teachers need to also become middle school certified. Teachers must meet the requirements to be technology proficient during their next renewal certification cycle. Based on the ePortfolio system, currently 43 of our 86 teachers are Level 1 proficient, however this appears to be reflective of a knowledge of "how to use" technology not "how to integrate technology".

Our current student computer ratio of 1:25 in our classrooms is based on each site having a computer lab. Our teachers have computers in their rooms. However, these are antiquated making it difficult to incorporate newer streaming video and web content in lesson plans. The scarce accessibility of computers for students is problematic since many of our students have no internet connectivity at home to complete projects based on survey results. With the use of wireless notebooks both students and parents could become involved in the instructional activities of the schools through a student check out program.

School facilities have also been identified as a need to be addressed. Annually, the district School representatives indicate that meeting the No Child Left Behind Adequate Yearly Progress is a constant worry. There is a need for more in-house staff development in standards-based instruction and coaching/modeling of best practices. More emphasis needs to be placed on math, science, and social studies; however, reading continues to be a definite need for improvement across the district. Several schools are interested in their own curriculum coach to assist with all content areas. All schools indicate a need for more teachers and assistants to serve in the classrooms and in the remediation roles during and after school hours. All schools want to increase parent involvement/participation. Schools have voiced a need for more leveled readers to include nonfiction for differentiated instruction, content novels, more participation in science lab activities, expanded career/technological opportunities, year-long English and math courses and flexible scheduling.

Secondly, teacher quality is being addressed. According to NCLB, teachers must be highly qualified by the end of the 2005-2006 school year. Currently, all but one of the district's core academic subject area teachers are highly qualified. Middle school teachers need to also become middle school certified. Teachers must meet the requirements to be technology proficient during their next renewal certification cycle. In addition, there are three teachers who are presently participating in the TERI program and will have to be replaced in the near future. Three teachers on TERI have completed TERI and have been rehired. Six retirees are also currently employed.

By federal law, paraprofessionals must also be qualified. At the present time, 100% of the paraprofessionals in the district meet this requirement. Quality professional development opportunities must be provided so that teachers meet the high qualified requirement by the beginning of the 2006-2007 school year and paraprofessionals by January 8, 2006.

Thirdly, school climate is being addressed by: teacher attendance, student attendance and school safety. Teacher attendance will be measured by the Annual District Report Card. The 2007 district report card indicated that teacher attendance was 95.8%. Strategies have been developed to improve teacher attendance at 0.1% per year for the next three years in order to reach a teacher attendance rate of 98% by 2010.

Lastly, school facilities have also been identified as a need to be addressed. Annually, the district comprises a listing of renovation, maintenance and repair. This list is presented to the School Board as information and funding if state or local 1% sales tax funds are available. A disparity continually exists with the amounts increasing between the cost of identified needs and the funds available. This disparity will eventually lead to a bond issue to fund the gap between improvements needed and resources. The district currently maintains 159,778 square feet with construction ranging from 1952 to 2009.comprises a listing of renovation, maintenance and repair. This list is presented to the School Board as information and funding if state or local 1% sales tax funds are available. A disparity continually exists with the amounts increasing between the cost of identified needs and the funds available. This disparity will eventually lead to a bond issue to fund the gap between improvements needed and resources. The district currently maintains 159,778 square feet with construction ranging from 1952 to 2009.

3 District Needs Assessment

As a facilitator of education, Clarendon County School District Three must meet student and instructor needs at the present in an effort to prepare them for the future, both short-term and long-term. The district must provide both an infrastructure and environment that provide for individual transformation to occur. Corporate direction, professional and technical support along with apt funding are mandatory for developing a platform of this capacity. Without a singular direction, an environment that encourages learning or an infrastructure supporting tools for all levels of learning, the district's ability to effectively educate is drastically impaired.

During past years, the infrastructure within the district has provided minimal benefits such as basic Internet access and simple file sharing. In order to support a more advanced role for use of technology over the next three years, the district must develop a more robust and adaptable infrastructure. To accomplish this goal, the district's technology department has already begun a series of initiatives to consolidate valuable assets. The SC state guidelines recommend replacement of computer hardware every 3-5 years in order to achieve moderate to high efficiency. A significant amount of our infrastructure does not fall within the recommended range.

The district is currently experiencing increased enrollment, directly impacting the availability of technology resources. A significant number of these students are in the grade school level. The majority of our technology requirements increase as students advance through to higher grade levels. This will require additional computers in order to maintain existing student to computer ratios.

Due to funding shortages, the district must restructure hardware currently on hand in a way that provides more opportunities for success. The beginnings of this process has included the restructuring of the district's networks; utilizing new firewalls and pre-existing switching devices. Servers and services are in the beginning stages of consolidation. By consolidating services and applications, the maintenance burden of supporting multiple installations is decreased. Consolidating the servers and other hardware needed to host those applications also makes excess hardware available to achieve other objectives.

Currently, a direct impact to end users has included the reallocation of desktop workstations to support more standardized roles. Homogeneous model workstations within the district have been brought together and redistributed to classrooms. The redistribution of these machines has taken place within the confines of program and funding boundaries. As machines have been redeployed, each has been re-imaged to provide a consistent desktop operating environment to the learner environment.

Additionally, the technology department and district office have been planning an installation of fiber optics between the district office and the middle and high school buildings. This will increase the district office's bandwidth from 10 megabytes per second to 1000 megabytes (or 1 gigabyte) per second. This will provide the district with a dedicated connection between the district office and middle school; as well as a dedicated connection between the district office and high school.

While the middle and high schools have merged into one entity, the physical buildings and networks must still be treated as independent units. An increase of bandwidth from 10 megabytes per second to 100 megabytes per second between the elementary school and the remainder of the district is also planned.

Much can be achieved within the district with limited resources as long as the underlying foundation is secure and firm. Thus, the district's core infrastructure must be overhauled. Such an overhaul will require the reuse of existing equipment in new and interesting ways. The district requires the purchase of products based on needs and the product's ability to fulfill those needs.

While these acts represent only the beginning steps, this represents a major degree of change to the pre-existing network infrastructure.

Students need to learn to appreciate and fully utilize all the technology that surrounds them. However, it is difficult to display the power and efficiency of such technology if the backbone upon which it operates is faulty and unreliable. Upgrading the network underpinnings and providing additional computer units, especially rugged units geared towards younger students would be beneficial to the district's overall technology goals.

Teachers need to feel in control of the technology present in their classrooms. Too often, technology intimidates and frustrates instructional users. This frustration is accompanied by a fear of breaking things. Through utilization of a proven development model such as Train the Trainer, the district can mitigate fear of technology by selecting individuals displaying a certain degree of familiarity and comfort with technology to mentor and share their knowledge with their fellow educators.

Teachers must reclaim control over technology and learn to make it work for them, rather than against them. A strong foundation is required for such change to take place. Technology and instructional leaders must stand by their stakeholders and assist them in the fight to take reign over their classrooms. An infrastructure for providing instruction and support to the instructors must

be put into place. The district will make use of instructional and continued professional development, such as the annual EdTech Conference, to reinforce teacher confidence as new technologies and equipment are integrated into the environment.

Previously, instructional media has been limited to the few educators that have access within their classrooms to interactive whiteboards, document cameras and projectors. Since 2008, the district has made significant strides to mitigate the disparity of available technology resources by continuing to install projectors and document cameras in classrooms. Though the district has not enough traditional funding to place such equipment in every classroom, we continue to work on obtaining grants and other funding sources for their purchase.

As things begin to change, curriculum within the classroom will begin to shift from technologies of the past, to technologies of the future. Integration of new technologies is paramount in preparing students for the 21st century. Recorders and tape machines will be replaced by iPods and mp3 players. Overhead projectors will be thrust aside for document cameras. Children will no longer hesitate to raise their hand to offer answers. Instead, they will race against one another to offer up a response via electronic polling systems. Technologies such as webcasting will continue to expand the opportunity for learning beyond the classroom environment.

Communities will find themselves changed by the innovation of those rising from within the local school system and entering the public work force. Young men and women will begin to test the waters of the work place and look for new ways of accomplishing old goals. Those who look on from a platform of experience in the market place will be prompted with new ideas of achieving success by the very youth of their community. Providing basic resources, such as expanded community library resources and better access to computers and Internet access at the community levels, can help foster overall goals.

The district's technology department is engaged in an ongoing process of assessing existing infrastructure resources. Utilizing these assessments, the district is enabled to better allocate resources in a way to achieve the goals set forth in this document.

The remainder of this document outlines a roadmap for the future of technology within Clarendon County School District Three. As a roadmap, stakeholders will receive a clear guideline for decision making in an effort to unleash the full potential of the district's technology and initiatives.

4 District Vision, Values, and Beliefs

VISION

Every student will graduate from Clarendon County School District Three with the knowledge and skills to be successful in post-secondary education/or the workforce.

VALUES

- Every child can learn and succeed.
- The pursuit of excellence is fundamental and unending.
- An ethical school system requires fair treatment, honesty, openness, respect and integrity.
- A high quality school system strives to be responsive and accountable to its stakeholders.

BELIEFS

WE BELIEVE

- High expectations yield high results
- All people have inherent worth
- Success is habit-forming
- All students are individuals with unique needs and the ability to learn
- Students deserve respect, acceptance and encouragement from the home, school, and community
- Students should be provided a safe environment for learning
- Students need a balanced curriculum that provides opportunities for academic and social development
- Education is the responsibility of the home, school, and community
- Learning is the responsibility of the individual Individuals are responsible for the choices they make and their consequences
- Learning is a life-long process that is essential for continuous growth
- The quality of the community is directly related to the quality of the educational system
- The success of our nation, state, and community depends upon a belief in God and respect for our country, its democratic institutions and each other
- God created one race; the human race
- The family is the primary influence in the development of the individual
- All people need to give and receive love
- All people deserve to be treated fairly
- Change is a necessary process that fosters academic, social, emotional, physical and spiritual growth
- Moral and spiritual values are necessary for the complete development of the individual

5 District Mission

It is the mission of Clarendon County School District Three to provide all students with a high quality education focused on academics and student learning, that they are equipped to function in an ever-changing world.

6 Overview of the Technology Dimensions

6.1 Learners and Their Environment

Goal:

Embed digital information systems into research-proven instructional strategies so students can achieve technological literacy, attain 21st century skills, and meet state's academic standards. Business and industry leaders repeatedly discuss the need for the workforce to possess 21st century skills and the American public agrees. In a survey of registered voters conducted September 2007, 70% defined computer and technology skills as "basic skills." They also see critical thinking and problem-solving skills as core 21st century skills. Those polled ranked these abilities almost as important as reading comprehension to competing in today's economy. This dimension relies on strategies to enable students to meet the state's high academic standards and master core 21st century skills. The environment should be one of shared learning and should be designed to enhance student academic achievement through scientifically based learning practices and modern technologies.

For additional information, please refer to 7 on page 16.

6.2 Professional Capacity

Goal:

Provide curriculum development and professional development/training to increase the technical competency of all South Carolina educators so that research-proven strategies and the effective integration of instructional technology systems can continue to increase student achievement. This includes assistive technology. Professional capacity emphasizes strategies to develop ongoing and sustained professional development programs for all educators—teachers, principals, administrators, instructional technology personnel, guidance counselors, school library media personnel, and technical staff.

For additional information, please refer to 8 on page 24.

6.3 Instructional Capacity

Goal:

Use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement. Instructional capacity targets the development of strategies to integrate technology into curricula and teaching and also explores ways to promote teaching methods that are based on solid and relevant scientific research.

For additional information, please refer to 9 on page 28.

6.4 Community Connections

Goal:

Use technology, including assistive technology, and digital information systems to maximize community involvement and community partnerships and so increase student achievement. This dimension supports the development of partnerships and collaborative efforts to provide technology-related activities and to maximize community involvement in education in ways that will increase student achievement and teacher technology proficiency.

For additional information, please refer to 10 on page 33.

6.5 Support Capacity

Goal:

Expand and support technology resources to assist educators and learners in attaining 21st century skills and meeting the state academic standards. Support capacity underscores the necessity of physical and staff infrastructure and supporting resources such as services, software and other electronically delivered learning materials, and print resources in order to ensure efficient and effective uses of technology.

For additional information, please refer to 11 on page 38.

7 Technology Dimension 1: Learners and Their Environment

GOAL:

Embed digital information systems into research-proven instructional strategies so that our students achieve technological literacy, attain 21st century skills, and meet the state's academic standards.

7.1 Snapshot of Current Technology Use in District

There are many resources available to the district that allow assessments of where a student stands in their educational experience. Now more than ever, district educators can reach children on individual levels. Educators can tailor instruction and use of materials to best enable a child to reach their full potential.

Students have several resources at their disposal to achieve technological goals of the district and to meet state standards. The following examples are a few:

- The Middle-High School media center offers students and teachers 14 computers for individual or class use.
- The Middle-High School media center offers students 7 computers for using Accelerated Reader.
- The Middle-High School media center offers students 7 computers for searching the library catalog system.
- Middle-High School students have four computer labs with an average of 25 computers.
- The Elementary School media center offers students 10 computers for using Accelerated Reader.
- Elementary School students have one computer lab with 23 computers.
- Middle-High School journalism and yearbook students have computers to accomplish their publication goals.
- Teachers and students use Microsoft Office (Word, Excel, PowerPoint, and Publisher) and OpenOffice (Writer, Calc, and Impress) to complete lessons and projects.
- Some teachers use Smart Boards, projectors and document cameras to instruct in the classroom.
- All teachers use IGPro/Gradebook Plus and ClassXP [3].
- Students and parents have access to SCOIS for career and college guidance and assessment.
- Students and teachers have access to DISCUS and other online databases for research and reference.
- Teachers also use United Streaming, Discovery Education, TeacherTube and SchoolTube videos in their lessons.

7.2 Overall Goal for This Dimension

Our focus for this dimension is to take global concepts and apply them at the individual student level. Through additional assessment, individualized learning, software geared towards individual learning, flexible learning environments, mobile computing, and upgrades to the library system, we hope to achieve this very important goal - efficiently and cost effectively.

7.3 Objectives, Strategies, and Action List to Reach Goal

Below you will find the action list for this dimension outlining the individual steps necessary to achieve the strategy or goal. It is organized into corresponding sections and subsections. Following each action item, a description of that action item is included. These may include information about the software, implementation, strategy or other various notes. These sections are referenced in subsequent order by corresponding outline numbers. Generally, all references are hyperlinked for ease of navigation throughout the document.

[3] Soon to be replaced by PowerSchool

7.3.1 Distance Learning

The district will make use of technologies in order to see distance learning occur within and outside our schools. Use of webcasting technologies (for more information, please refer to 7.3.12 on page 20), allow students and classrooms to connect with other schools, universities, college professors, workforce/field experts, etc. Distance learning, when applied within the district, also allows homebound students to participate in daily classroom activities while not physically present. Use of online learning systems such as the South Carolina Virtual Schools Program (for more information, please refer to E2T2 grant[4]), offer students the opportunity to partake in classwork out side of the district via the Internet. Further, collaboration between the district and its partners, such as Spartanburg County School District Three, provides distance learning opportunities for both individuals within our district and those within our partner districts.

7.3.2 Testing and Assessment

The District utilizes several tools to test and assess where students are within their general learning levels. These tools include MAP testing or Measures of Academic Progress. MAP is a state-aligned computerized adaptive assessment program that provides district educators with the information they need to improve teaching and learning. Educators use the growth and achievement data from MAP to develop targeted instructional strategies and to plan school improvement. With the ability to test students up to four times a year, MAP test results help educators make student-focused, data-driven decisions.

The district makes use of MAP Mathematics, Reading, and Language Usage tests to help all students learn. These assessments are unique in that they adapt to each student's ability, accurately measuring what a child knows and needs to learn. In addition, MAP tests measure academic growth over time, independent of grade level or age. Most importantly, the results educators receive have practical application to teaching and learning. MAP test results provide educators with timely information that guides instructional planning and school improvement.

7.3.3 Individualized Learning

The information gathered from the MAP testing is integrated with other software such as MAPTrakker/TesTrakker. MAPTrakker is an online resource that provides the tools necessary for all teachers to develop their lesson plans and to submit them to the administration. These lesson plans can be developed around the RTI (Response To Intervention). As plans are specific to each child's needs, the system assists educators in differentiating instruction.

7.3.4 Compass Learning

Compass Learning Odyssey is an instructional software that buttresses the traditional instruction that students receive in the classroom and further addresses the RTI.

Compass Learning Odyssey assesses student understanding of key objectives. Odyssey helps educators identify students struggling with academic concepts and delivers personalized, scaffolded instructional support for each student. The electronic diagnostic assessment in Odyssey targets the skills that each student lacks and then creates an individualized learning path for that student. The time-consuming task of monitoring and measuring student success is made easier with Odyssey's wide variety of reporting features.

Compass Learning Odyssey solutions for secondary students can help teachers address each and every student's need for engaging instructional content and personal attention. Odyssey applies innovative teaching methods within a rich, interactive learning environment, using Flash-based activities — complete with sound and animation — to teach and review concepts. All Odyssey courses are based on current and confirmed research geared towards the way secondary students think and learn.

Specialized learning paths can be used for mainstream study, summer school, core, and academic remediation programs as well. Plus, Odyssey's flexible online anywhere, anytime delivery works with students' busy schedules.

Courses for grades 6–8 solidify students' familiarity with core concepts while introducing them to more advanced content and setting the stage for high school study.

For additional information, please refer to 14.5.5 on page 73.

[4] Clarendon County School District Three was award a grant on September 18th, 2009 for Partners And Coaches for Technology (PACT), in partnership with Spartanburg County School District 3 to create a 21st Century District learning atmosphere.

7.3.5 Orchard Software

Orchard Software is the software equivalent of Compass that is used at elementary levels. Orchard Software provides differentiated targeted instruction in math, reading, writing, language arts, and science for grades K-9. Combining formative and benchmark assessments aligned with state standards, motivating instruction, and qualitative data reporting, Orchard Software is the preferred choice for thousands of schools across the country looking to improve Adequate Yearly Progress (AYP). Orchard Software provides schools with a powerful solution that enables educators to adapt and deliver both individualized and whole class instruction that meets the needs of all students, including English language learners (ELL) and those with special needs. Orchard has proven effective in helping teachers differentiate instruction in multilevel classes and provides flexible pricing and scalability so that any classroom, school, or district can implement and take advantage of Orchard's research-based and motivating content.

Orchard's blend of research-based teaching techniques, including skill builders, critical concepts, and learning games, provide instruction, practice, and review of master skills. Students take a short test, which places them in the appropriate Skill Trees. These assessments are correlated to each state's standards and enable teachers to target instruction to students' individual needs. All work is captured in detailed reports to help teachers communicate student growth and make critical, data-driven decisions. In spite of Orchard's powerful management capabilities, the program is refreshingly intuitive.

For additional information, please refer to 14.5.16 on page 81.

7.3.6 Accelerated Reader

Accelerated Reader is yet another tool that builds a differentiated program of study for students in the area of reading. Each student's reading practice is customized to their current level of ability. Students use Accelerated Reader by acquiring books to read and then taking an assessment on that book to test their retention and understanding of their reading.

"Accelerated Reader provides daily information about student reading and makes it easy to continuously monitor comprehension, track the time students spend reading, and differentiate reading practice. A student's data profile is complete only when it goes beyond test scores, showing the full picture—reading achievement data and how well, how much, and at what difficulty level students are reading"

For additional information, please refer to 14.5.1 on page 70.

7.3.7 Apex Learning

"For many students, the need to recover only one or two course credits is all that stands between them and graduation from high school. These students may have already satisfied seat time requirements for a course in which they were unsuccessful — and may have learned a significant amount of what was expected of them. These students are seeking an opportunity to accelerate through the required course material to earn those final credits.

Other students are ill prepared for high school coursework and have failed several classes. For these students, the challenge of making up the required credits is daunting. If the only option is to repeat the same course, in the same traditional format as the first time, the chance of success is low. Not wanting to fail again, these students are at increased risk of dropping out — or may have already dropped out. With support, these students can be successful.

Apex Learning digital curriculum makes it possible for the district to offer a credit recovery program that addresses the diverse needs of all these credit-recovery students.

With Apex Learning online courses, students can progress at their own pace, taking as much — or as little — time as necessary to master the material. Particularly significant for credit-recovery students, unit-level diagnostics allow students to move quickly over material they have previously mastered. Direct instruction incorporates multimedia — in the form of images, audio, video, animations, and interactive elements — along with instructional text to provide students with multiple representations of concepts as well as address their different learning styles. This could be just what is required for a previously unsuccessful student to succeed in rigorous high school courses."

The district provides credit recovery services to students two days a week at the high school. Students are allowed to utilize the Apex Learning program from the instructional lab where an instructor is available to assist.

For additional information, please refer to 14.5.4 on page 72.

7.3.8 HelpMe2Learn

The Help Me 2 Learn Company creates educational games for children that teach Phonics and Math that are easy to use, easy to navigate, fun, and promote lasting learning and retention. Currently, HelpMe2Learn has been utilized as a tool for Spanish instruction at the elementary school level.

The Super Star Strategy for Success is simple: Build the best team possible and support the team with the best resources possible. Support the team with better communication, feedback and access.

For education, the best team is the school, the teacher, the student and the parent - all working together for the academic success of the child.

For additional information, please refer to 14.5.21 on page 84.

7.3.9 Mobile Labs

A mobile lab consists of a lockable rolling cart that houses a large number of laptops and power adaptors. Combined with wireless connectivity throughout the district, this mobile lab allows teachers to quickly provide computers to students in the classroom.

In Q3 of 2008, an initial mobile lab of 12 laptops was provisioned for the elementary school.

In Q3 2009, an initial two mobile labs of 25 laptops each, were provisioned for East Clarendon Middle-High School.

These two labs have been utilized for day-to-day instruction and for testing scenarios. During the weeks of MAP assessments, the mobile labs were taken room to room throughout the day for student testing. Previous testing periods required students and classes to alternate through the traditional computer labs.

It is the goal of the district to increase mobile labs to one lab per grade level in grades 6^{th} through 8^{th} and one lab per department in grades 9^{th} through 12^{th}.

At this time, mobile labs have not proven as effective in the elementary school environment. As an alternative, laptops for teacher use has been a more effective strategy. The district will continue to evaluate possibilities within the elementary grade levels. Such considerations may include laptops that are designed for younger students. These types of machines need to be more simplistic in parts and interface. They also need to be more rugged for possible use by younger students. Units such as the Neo2 or Dana, which are made for use with Accelerated Reader, may be a better fit for these grade levels. Other options may include the “Classroom PC” by Intel or other similar devices.

7.3.10 Classroom Computers

Ideally, each classroom should contain a minimum of 2 computers: 1 for teacher use and 1 for student use. Previous technology plan goals suggested 10 computers in all classrooms. We feel that modifying the goal to a minimum number of stations is more realistic when buttressed with the use of additional mobile labs.

7.3.11 Journalism

The journalism department of the middle-high school makes use of several types of technology in order to obtain their goals throughout the year. This department is tasked with the creation of the school yearbook. To obtain their goal, journalism students utilize digital cameras for recording photos for school events and vendors or sponsors. They may also utilize scanning devices for digitizing physical photos for inclusion in the yearbook. Further technology use includes software such as Picasa to manipulate photos such as correcting lighting or reducing "red-eye".

As the journalism staff acquire their ads, photos and other materials, they insert these items into the publishing software provided by the yearbook vendor. This software allows them to place items in various locations within the yearbook. This desktop publishing software is provided via a web-based delivery method. The software is hosted by the yearbook vendor.

7.3.12 Webcasting

A webcast is a video and/or audio broadcast transmitted via the Internet. These broadcasts can be either live or pre-recorded. In a classroom setting, educators can record themselves and their digital presentations (slides, videos, etc) during a lecture. Students that are attending class physically, can reference these recordings later from the comfort of their home via the Internet or from a workstation in the school or other facility (library, etc). Students can have "watch parties" before exams to collaboratively meet and go through all class lectures together. This allows them to review material before an upcoming exam. Students can review, correct or obtain notes that they otherwise missed during class.

Others that are unable to physically attend the class, such as home bound students, can access the live webcast during the actual class time. They can also follow up by watching the recorded archive of the class. For those not physically present, they can still interact with the class during a live class by use of audio, video or chat methods. An online participant may have the ability to ask question via one of those methods. This allows home bound students to remain current, to receive the same teaching, and to feel as if they are still a part of the class.

Another possibility created by the use of webcasting is that of guest lecturers. Experts in a particular subject or area of study can participate remotely within a webcast. For example, a professor at a university hundreds or thousands of miles away can still be present in the class via a video connection and interact with the class.

The possibility is also presented to allow interaction, participation, observation and or learning opportunities by and for parents. If there is homework being sent home that might be tough for a student, a teacher may teach a lesson on it and parents can see how the lesson is taught so they can more readily assist their child in completing the homework assignment and understanding the material.

Faculty and administrators can also use webcasting, whether live or pre-recorded, to assist in evaluating one another. They can review and assist one another in different methods of teaching a specific concept or subject. This type of review process can be a collaborative effort for mutual growth and skill development, not necessarily meant to "make certain a teacher is doing their job". Other educators may learn new methods or ideas by simply reviewing lessons taught by their peers.

7.3.13 Flip Cameras

A Flip Camera is an very portable digital video recorder, that is about the size of a digital camera. It is ultra portable, quick to start, and very easy to use. It allows easy integration for uploading to computer, internet website, editing software, etc.

With the progress of technology, video content recording has become a "low hanging fruit". In previous years, recording and manipulation of video was a very tedious and time consuming task. As software and camera technologies have improved, this process has become much more streamlined and simplistic. Administrators, teachers and students ranging from elementary to high school ages can now partake in the process of recording and presenting videos for various venues and projects.

Due to the design of such cameras, it is easy to extract the video from a computer workstation and upload it to the district's video portal. From the portal, classes and users can access this video from any location around the district. Video can also be easily uploaded to the district or school website for exhibition to the community.

Possible uses may include:

- Teachers
  - Record material for class
  - Record material for review by peers (ie, class, lecture, etc)
  - Record student presentations for review or for use as models for future classes
  - Documenting field trips
- Students
  - Digital storytelling
  - Book or movie reviews
  - Enact plays/skits of books/movies

- Documentaries
- Observations regarding class subjects (IE, observing a squirrel or other animal for a science/biology class)
- Documenting field trips

- Administrators
  - A principal may carry a camera around in their pocket throughout the day. As they see great interaction between students, unique teaching methods, or an overall great experience in a classroom they use the camera to record the experience. Then, during faculty meetings and staff development they can share their videos with the staff as great examples of what is and should continue to happen in the school. [5]

The overall cost of such cameras is low. Average pricing found online is approximately $150.00 per unit. There are offers available that provide a "buy one, get one free" incentive for the purchase of these units (see Digital Wish). Additionally, grants are available for Flip cameras through public charity organizations such as Digital Wish (http://www.digitalwish.com).

7.3.14 Student Email

The state recognizes that technology is a key to educational progress and preparing the 21st century workforce. Students require familiarity and exposure to various technologies to attain technology proficiency. Our school district has a lack of available technology outside the school environment, such as, computers and internet access at home, no nearby library system offering computer resources, or public Wi-Fi options. Therefore our district has an increased responsibility to expose students to technology, such as availability of email for students, in addition to core curricula.

7.3.15 Student Fileshares

The state recognizes that technology is a key to educational progress and preparing the 21st century workforce. Students require familiarity and exposure to various technologies to attain technology proficiency. Our school district has a lack of available technology outside the school environment, such as, computers and internet access at home, no nearby library system offering computer resources, or public Wi-Fi options. Therefore our district has an increased responsibility to expose students to technology, such as availability of network file shares for students, in addition to core curricula.

7.3.16 Teacher & Student Drop Boxes

The student homework dropbox is a homework submission tool that enables students to upload homework assignments and allows instructors to comment/ evaluate and return assignments through a simple portal interface.

For teachers a digital drop box may seem similar to the physical box assigned to them in the school office. It is similar to a ballot box; a file can be put into a drop box but no one can see or change anything already in the drop box. It can be used to securely submit files and work to the teacher. It can also be used to automatically prevent submissions after a specific time period (ie, prevents a student from turning in late work).

Expansion of such functionality is a goal of the district as a eans to streamline communication between educators and learners.

7.3.17 New Library System

Since the 1990's, the district has utilized the Winnebago Spectrum library software package. Upgrade and software update support for this program was discontinued in 2003. Under the software's current configuration, the elementary school and the middle/high school operate as two separate entities. As such, it is an extremely tedious process to migrate student information between the two systems as a student advances from elementary to middle school.

Limitations of Current Spectrum System:

[5] Paraphrase from http://cnx.org/content/m32297/latest/

- Cannot promote students from the Walker Gamble Elementary School to the East Clarendon Middle-High school easily
- Student history does not follow a student from one school to the other
- Accessibility is limited due to required installation of Windows client software for patron catalog (searching/browsing books).
- Information about books in the system is limited
- Since 2003, there are no further functionality or security updates to Spectrum
- As updates are made to server and workstation operating systems, stability of the current system is more likely to degrade (example: Spectrum is currently not supported on Windows Vista)
- Both libraries currently pay annual support fees solely for technical support
- As more and more resources become web accessible, the demand has increased for web access to the district's library management system. Parents, students, and teachers all wish to access the catalog of books/resources via the Internet. This system is not web based or available externally.

The current software is not adequate for either current or future needs. Since it is no longer supported, Spectrum is outdated, static and offers no opportunity to provide additional benefits. As such, it is recommended that the district move to an alternate product to service this need. Many such alternatives exist to achieve this goal.

Below is a list of desired functionality and criteria for evaluating an alternative product:

- Respects Web Standards
- Scalability
- Customization
- Lower cost of ownership
- Multiple hosting options, not tied to a specific operating system or vendor
- Support mechanisms
- Integration with existing bar-code scanners
- Students can be moved/shared between both school libraries
- Complete student/patron history is maintained in the library system
- Library catalog can be accessed via any web browser (Internet Explorer, Firefox, Safari, Konqueror, Opera, etc) on any operating system (Windows 98/XP/Vista/7, Mac OS X, Linux, etc)
- The library catalog can be accessed from any location (library workstation, classroom workstation, lab workstation, external Internet connection, etc)
- Additional information can be assigned to books (Amazon.com cover photos, excerpts, table of contents, sample chapters, etc)
- Circulation client is cross platform (Windows 98/XP/Vista/7, Mac OS X, Linux, etc)
- Billing, Fees, etc
- Shelf Position – allows users to have a visual indication of books/resources surrounding a specific item (ie, lists covers of books to the left, right, above and below a book on a shelf)
- Email notifications
- Holds/Reserves
- Online user account information – allows users to check their account, fines, check outs, place hold requests, etc.
- Possible integration with Accelerated Reader
- Integration with PowerSchool – off the shelf or via import/export mechanisms

One recommended solution is Evergreen/Open ILS software. While migration costs might apply, no standardized support costs exist. The open source community, which is led by the Georgia PINES library system, acts as a second tier of technical support. The third tier of technical support is available commercially via Equinox, a support firm in the Atlanta, Georgia area. First tier support will be provided by East Clarendon School District Three's technology department.

The South Carolina LENDS consortium was founded and developed around the Evergreen platform. By 2010, twelve public library systems will go live using the Evergreen system. This includes the neighboring library system of Florence County.

This provides several benefits to East Clarendon School District Three:

1. Students who have used Evergreen at school from the elementary to high school will have familiarity and experience in using the same software found in the public library system. Likewise, anyone using the public library will be comfortable using the same system at school.
2. The state's investment in Evergreen will also be an investment in the open source community, thereby insuring the continued development and growth of Evergreen.
3. Centralizing student data contained in library management programs simplifies student matriculation from school to school, as all historical information follows.
4. Skill sets acquired in one institution will continue to apply in others (ie, public library to school library). Any instructional time invested at one location is an investment in others.

Evergreen Features & Benefits:

- Supported via open source community and/or commercial vendors (Equinox, etc)
- Software continually updated/enhanced by open source community and/or commercial vendors
- Software hosted on a Linux operating system – provides enhanced security and stability with no licensing costs
- Software is freely licensed. There are no contracts or periodic fees to pay for the use of Evergreen
- Circulation client is cross platform (Windows 98/XP/Vista/7, Mac OS X, Linux, etc)
- Identical interface and software as that used by the SC LENDS public library consortium
- Virtual Book Bags – allows users to place associated items in a common list/grouping
- Template System – system supports templating or theming the web portal to a specific look and feel
- Shelf Position – allows users to have a visual indication of books/resources surrounding a specific item (ie, lists covers of books to the left, right, above and below a book on a shelf)
- Students can be moved/shared between both school libraries
- Complete student/patron history is maintained in the library system
- Library catalog can be accessed via any web browser (Internet Explorer, Firefox, Safari, Konqueror, Opera, etc) on any operating system (Windows 98/XP/Vista/7, Mac OS X, Linux, etc)
- The library catalog can be accessed from any location (library workstation, classroom workstation, lab workstation, external Internet connection, etc)
- Online user account information – allows users to check their account, fines, check outs, place hold requests, etc.
- Integration for billing & library fees
- Additional information can be assigned to books (Amazon.com cover photos, excerpts, table of contents, sample chapters, etc.

8 Technology Dimension 2: Professional Capacity

GOAL:

Provide curriculum development and professional development/training to increase the technical competency of all South Carolina educators so that research-proven strategies and the effective integration of instructional technology systems can continue to increase student achievement.

8.1 Snapshot of Current Technology Use in District

Based on the ePortfolio system, currently 43 of our 86 teachers are Level 1 proficient. However, this appears to be reflective of a knowledge of "how to use" technology, not "how to integrate technology". With limited access to computers and only seven interactive whiteboards, our teachers are in dire need of the necessary equipment, professional development and partner/coaching to integrate technology in the curriculum.

8.2 Overall Goal for This Dimension

Technology is worthless without a team of well-prepared educators committed to utilizing that technology to better serve the students within the district. Through an ongoing process of evaluating and enhancing technology proficiency, seeking additional training opportunities and providing real case techniques for using technology, we hope to build such a team for achieving this goal over the next three years.

TechnologyProficiency is an initiative of the South Carolina Department of Education. Proviso 1.25 states that for the effective and efficient use of the funding for school technology in the classroom and internet access, the State Department of Education shall approve teacher technology competency standards. Local school districts must require teachers to demonstrate proficiency in these standards as part of each teacher's Professional Development plan.

8.3 Objectives, Strategies, and Action List to Reach Goal

Below you will find the action list for this dimension outlining the individual steps necessary to achieve the strategy or goal. It is organized into corresponding sections and subsections. Following each action item, a description of that action item is included. These may include information about the software, implementation, strategy or other various notes. These sections are referenced in subsequent order by corresponding outline numbers. Generally, all references are hyperlinked for ease of navigation throughout the document.

****

8.3.1 ePortfolio

During the 2009-2010 school year, Clarendon School District Three began using the ePortfolio system provided by the South Carolina Department of Education. ePortfolio system is used to ensure teacher technology proficiency and proficiency testing addressed. Using this online system, instructors can assess their competency levels in various areas. Based upon their assessments, these educators may then proceed through online lessons to sharpen their skills in both areas displaying weakness and those areas that they wish to have more understanding.

In order to exhibit Technology Proficiency, each instructor must meet different requirements based upon an acceptable or unacceptable assessment. These requirements may involve different degrees of online and outside studies and/or projects.

8.3.2 Technology Coaches

The district will look to acquire funding via grants, such as E2T2, to provide employees with onsite technology coaches. The technology coach's primary focus will be to assist classroom teachers to successfully integrate the use of effective strategies and multiple technologies to differentiate and enhance student learning. Technology coaches will also focus on refining the skills of fellow educators so they understand when to integrate technology as well as how to integrate technology most efficiently. The technology coach may achieve this by providing development sessions on infusing technology, by participating in classroom observations, and by remaining available for individual training or tutoring sessions.

The District Technology Coach will implement an integrated technology model using laptop computers with teachers and students in order to access web-based technology integration activities aligned with state academic standards and incorporating ISTE's NETS-S standards.

The District Technology Coach will ensure technology proficiency through a Technology Partners Conference, monthly sessions, team teaching, and mentoring in district and with Spartanburg 3. Spartanburg 3's coach will work collaboratively with our District Technology Coach in order to implement their comprehensive training model for integrating technology in the classroom. The District Technology Coach will provide teachers with rigorous professional development on integrating technology into core curriculum.

The District Technology Coach in collaboration with partner Lineage Services Group, LLC (LSG) will implement the following technology course ware during the Technology Partners Conference. Content will include:

1. Developing lesson plans based on web content and how to integrate the Internet into instruction
2. Develop lesson plans that assign basic to moderate tasks daily on more complex activities such as demonstration, email, computer programming, and web page creation
3. Explore novel and innovative methodologies for using Promethean boards to engage and accommodate multiple learning styles
4. Integrate technology using podcasts to develop reading, speaking and writing skills
5. Integrating distance learning in collaborative sessions for differentiation of instruction

The district has long-term plans to continue the District Technology Coach strategy after grant funds are expended. Teacher and student technology proficiency and the integration of technology into the curriculum are critical to the long term progress in student achievement. Sustaining the best practice of a District Technology Coach to develop a cadre of School Technology Partners who will work with the Coach to mentor teachers and provide the ongoing professional development strategies are necessary. Clarendon Three will provide a District Technology Coach based on the qualifications outlined in the state's program.

8.3.3 School Technology Partners

Utilizing a proven development model known as "Train the Trainer," the district will further look to select individuals within the district that have displayed a certain degree of familiarity and comfort with technology, a willingness to share their knowledge and a desire to assist their fellow educators. These individuals, School Technology Partners, will be designated as assistants and apprentices of the district technology coach. The technology coach will be given the task of training these individuals as fellow technology trainers.

Because the district technology coach cannot be available to all educators at all times, these assistants will act as local level training support. These assistants will learn from the technology coach through observation, one-on-one training sessions, attendance to technology training events such as EdTech, as well as performing actual training sessions directed and overseen by the technology coach. They will help bridge the technology divide by serving as internal technology mentors to colleagues. The School Technology Partners will also assist the District Technology Coach in the implementation of the integrated technology model for teacher and student use of laptop computers to access web-based technology resources.

8.3.4 Internal Website Resources

In addition to standard professional development materials and resources, the district plans to catalog and provide access to a host of online resources. These resources may or may not provide educators with credit towards renewing their Technology Proficiency. However, in all cases, these resources will provide educators with material that will buttress their current skill set, introduce new skills and offer assistance in utilizing available technologies.

8.3.5 PowerSchool

As the district moves from SASIxp to PowerSchool, training for all faculty and staff becomes a priority. Thankfully, Pearson has provided access to a site called PowerSource. Using PowerSource, each individual will learn to utilize the fundamental basics of using PowerSchool for their needs. As a by-product, participants will also learn more about using web browsers to access other web-based applications such as PowerSchool. While this appears trivial, it will provide a basic level of training for those who require it.

8.3.6 Goodwill (gclearnfree.org)

The Goodwill Community Foundation formed the gclearnfree.org website to create and to provide quality, innovative online learning opportunities to anyone who wants to improve the technology, literacy, and math skills necessary for them to be successful in both work and life. It is their belief that there should be freedom in learning what you want, when you want, regardless of your circumstances. In an endeavor to meet this conviction, the GCF created gclearnfree.org.

Teachers, students and parents can utilize this site to sharpen life skills of all types. Educators can earn Continuing Education Units through the completion of GCF's online offerings. Course offerings include technology training, work and career training, and training for other life skills.

8.3.7 Teacher Micro Sites

Each teacher will be provided with a micro web site for their individual use. The micro web site or group of web pages will allow them to post information on their portion of the school's web site. This will enable the educators to communicate key information and updates to students and parents via the web. For some, this will be a very familiar task. For others, the process will require patience and access to tutorials to assist them in achieving this goal. These micro web sites will act as a showcase for educators to exhibit their technical merit and skills. This showcase will be more than just a display of their ability to publish a web site. They will have the opportunity to exhibit the exciting things they are doing in their classrooms with pupils and technology.

8.3.8 Video Portal

As video training materials become available to the district, educators need prompt and equal access to the learning material. The video portal that is mentioned in other areas of this document will also serve as a platform for publishing training materials to these individuals. A portion of this portal will be dedicated to instructional and professional development training videos.

8.3.9 Mailing Lists and Forums

The district's email server currently provides the ability for hosting mailing lists for any subject or theme. The district may combine the use of a mailing list or forum to provide faculty with a platform for discussion of technology integration and needs. Though the district is small and consists of only two schools, educators are seldom able to interact with one another during the course of the school day. By providing a discussion medium, communication relating to technical questions and advice and ideas can be shared among all staff on demand. An educator with a question regarding the use of a technology can post that question to the mailing list or forum. Another educator may respond, at any time and from any location, to assist in their endeavor.

8.3.10 EdTech

EdTech is South Carolina's premier educational technology conference. It is designed to promote the use of educational technology to enhance student learning. The mission of EdTech 2010 is to bring educators, administrators, technology professionals, college faculty and staff, public and academic librarians, business and industry trainers, industry representatives and policy makers together to think, discuss, listen and learn the best strategies to plan for, implement, and use educational technology in our schools.

The 2010 EdTech conference will be held at the Myrtle Beach Convention Center on October 27^{th} – 29^{th}, 2010. We propose to increase the number of delegates able to attend this year's conference, including the IT professionals (2), librarians (2), and teachers (4). This conference provides real-use case learning and techniques for utilizing technology in our schools. If funding allows, increasing the number of potential delegates in future years would be beneficial to overall district technology goals.

Attendees will be responsible for sharing their findings with their fellow educators upon return to the district.

Costs are estimated at $1800.

8.3.11 Microsoft Office 2007

Microsoft Office is an important productivity tool for the district's educators. However, there have not been an adequte number of software licenses to fulfil the district's needs. In Q1 2010, 100 licenses for MS Office 2007 were purchased for teacher and faculty use. It was funded through the special needs department. These licenses were purchased to buttress the existing 100 Microsoft Office 2003 licenses owned by East Clarendon School District Three. This enables the district to provide each educator with access to Microsoft Office while continuing to provide access to the computer labs as well. As funding dictates the ability of the district to procure new software licenses, the use of open source software solutions, such as the OpenOffice tool suite, helps to provide an equivilent productivity toolset with a zero cost basis.

For additional information, please refer to 14.5.15 on page 80.

9 Technology Dimension 3: Instructional Capacity

GOAL:

Use current and emerging technologies to create learner-centered instructional environments that enhance academic achievement.

9.1 Snapshot of Current Technology Use in District

Instructional media have been limited to the few educators that have access within their classrooms to interactive whiteboards, document cameras and projectors. The district has made efforts to change this by installing 38 projectors and 18 document cameras in classrooms, while utilizing the current white-erase boards. This has been an ongoing effort since the 2008-2009 school year.

Though the district has not enough traditional funding to place such equipment in every classroom, we continue to work on obtaining grants and other funding sources for their purchase.

9.2 Overall Goal for This Dimension

Technology requires both knowledge and tools to be successful. Along with technology savvy educators, cutting edge tools, equipment and technology techniques are necessary to continue moving forward with the district's technology goals. Providing teachers with DVD-ROMs, interactive whiteboards, and access to streaming network applications for video capture and video distribution will advance progress for the district's success at achieving this goal.

9.3 Objectives, Strategies, and Action List to Reach Goal

Below you will find the action list for this dimension outlining the individual steps necessary to achieve the strategy or goal. It is organized into corresponding sections and subsections. Following each action item, a description of that action item is included. These may include information about the software, implementation, strategy or other various notes. These sections are referenced in subsequent order by corresponding outline numbers. Generally, all references are hyperlinked for ease of navigation throughout the document.

	Previous	2009	2010	2011	2012
Interactive Whiteboards					
Document Cameras					
Projectors					
Response Units	0	2	1		

9.3.1 Network Video Distribution

One of the district's technology initiatives is the deployment of projectors within all classrooms with access to the projector through the teacher's desktop. This offers the ability to provide on-demand digital video distribution through the existing network infrastructure. This technology will supplant traditional televisions and mobile AV equipment, eliminating equipment requisition, allowing more efficient use of instructional time, and offset burdens placed on library and support staff.

In order to maximize the potential of this technology, purchase of a video capture device would be required. This will allow us to convert existing VHS materials and transcode them into an efficient bandwidth and storage codec. Distribution of video will be enabled through a streaming website using a Flash Player. Streams will be available in both low bandwidth and high bandwidth versions

9.3.2 Teacher DVD ROMs

With projectors and a educator computer in each classroom, we plan for all computers to have a DVD optical drive. All teacher computers will come pre-installed with a free, lightweight multimedia player called VideoLan Client (VLC).

VLC media player is a cross platform[6] multimedia player supporting most audio and video formats (H.264, Ogg, DivX, MKV, TS, MPEG-2, mp3, MPEG-4, aac, ...) from files, physical media DVD's, VCD, Audio-CD), TV capture cards and many network streaming protocols. There is no licensing cost for this software product.

9.3.3 Interactive whiteboards

Interactive whiteboards turn the computer and a data projector into a powerful teaching tool.

All intelligent whiteboards are compatible with computer applications, including Internet browsers, spreadsheets, and word processing. The list of education applications for this extremely useful device is almost endless, and limited only by the imagination:

- Presentations, music lessons, digital slide shows
- Tap "experts" in the field, research results instantly available
- Take "virtual" tours, "virtual field trips," and see simulations
- Examine concepts from different points of view easily
- Develop PowerPoint presentations
- Include streaming video of actual events via Internet clips
- Create digital portfolios
- Save lessons and present them to students who were absent
- Write stories and proofread them as a group
- Provide preschool computer learning without mouse dexterity problems

Whiteboards, paired with technologically knowledgeable teachers, open up the world to teachers and students. The availability of these inspiring devices varies greatly across the state, a digital divide that needs to be addressed.

Currently, 38 whiteboards are in use within the district. Following state recommendations, our goal is to achieve 1 interactive whiteboard per core classroom (87 total). Extending interactive whiteboards to additional classrooms, including non core classrooms, could be beneficial. Positioning them with greater presence within the primary school levels would be a beneficial, if lofty goal.

As the district continues to embed interactive whiteboards in classrooms, the need grows for each educator to possess the necessary skills to comfortably utilize the new technology at their disposal. Several organizations provide free online training in the use of SmartBoards.

Smart Technologies, the creators of the SmartBoard, offers web-based training on their product line. Additionally, the company offers several rotating live training web seminars each week. Educators have access to additional pre-recorded video materials from the same location.

Other organizations, such as SqoolTool and "interactivewhiteboard.net.au" offer additional training for SmartBoard use and integration.

[6] It supports Microsoft Windows 2000 and later, Mac OS X, Syllable, Linux and other Unix varients (including FreeBSD, NetBSD, OpenBSD, Solaris, QNX). Windows 95/98/Me is supported via an older release (0.8.6)

9.3.4 Flip Cameras

A Flip Camera is an very portable digital video recorder, that is about the size of a digital camera. It is ultra portable, quick to start, and very easy to use. It allows easy integration for uploading to computer, internet website, editing software, etc.

For additional information, please refer to 7.3.9 on page 19.

9.3.5 Projectors

Digital projectors are a critical piece of the 21st century technological classroom. Most of the technology in classrooms revolve around the digital projector. Though some of the projector's functionality can be mimicked by the use of televisions, projectors provide visual aides larger than those obtainable via standard televisions at a fraction of the cost. When combined with an interactive whiteboard, projectors move into a realm of functionality not feasible with televisions or monitors. Upgfading all core classrooms with digital projectors is an overall goal of the district.

9.3.6 Document Cameras

Traditionally, classrooms have made use of overhead projectors for years. With recent technology innovations, these overhead projectors are being replaced with document cameras. While the name of this device suggests it is for use solely with paper, the name is a bit misleading. Document cameras contain a camera that displays three dimensional objects just as easily as flat objects (ie, paper).

Document cameras are utilized with digital projectors to present an image to those in the classroom. This is of great benefit for displaying an object so that all learners can see the item equally. Uses for this technology abound. Instructors can display objects such as a Rubik's cube and display its operation. A librarian or elementary educator can display a book to the class as they read the story aloud – images of characters become life-size and take on realism displayed on a projector. Quizzes can be displayed allowing students to enter their answers via a classroom response system. A timer can be placed under the camera to keep students notified of time remaining for a task. Many uses exist for this device. Options are even available to connect microscope attachments for science/biology classes, etc.

Document cameras can also assist in cutting down on material usage. An instructor no longer has to work with overhead transparencies or markers – a simple piece of paper can be used. Images can be captured digitally for later usage and archival. This lessens the need to continually use paper for repeated lessons. Bulbs are no longer needed as is found with overhead projectors (granted that bulbs are required for digital projectors used within the classroom).

The district first purchased 4 document cameras for the elementary school during the 2008-2009 school year.

Purchases have been made for 14 additional document cameras for the elementary school during the 2009-2010 school year.

As all classrooms become equipped with projectors, the district desires to increase use of document cameras in all areas where use of these units excel. Expansion effforts to add additional document cameras at the middle-high school are planned.

9.3.7 Classroom Response Units

Classroom response has been around since the beginning of traditional education. Teachers and students alike are familiar with this concept. Teachers often ask questions requiring students to raise their hand if they agree or disagree with a statement. Teachers present students with questions that require the students to be first to answer, effectively racing against one another.

Modern classroom response comes in the form of a "clicker" or response pad, an RF or IR receiver and computer software. Using such "clickers", students can answer multiple choice questions, vote "Yes" or "No", and make other decisions.

Utilizing this system, instructors can display response results via a projector. Results can instantly be calculated and shown in graphs, bar or pie charts. Analyzing the results, the instructor and students can begin to discuss the results and concepts they are studying.

The district first purchased 6 classroom response units for the elementary school during the 2008-2009 school year.

Since this time, purchases have been made for 2 response units for the middle-high school during the 2009-2010 school year.

As all classrooms become equipped with projectors, the district desires to increase use of response units in subject areas and grade levels where these units excel.

9.3.8 Classroom Audio Listening Solutions

Classroom audio listening systems are designed to distribute sound evenly throughout the classroom. This enables students to hear clearly regardless of their position in the classroom. Many things impact the hearing of students within a classroom. Ambient noise is caused by large air conditioning units, facility maintenance crews, fluorescent lighting, loud peers (whether vocally or because of movement of books/desks/etc) and other sources of sound. When exposed to unfamiliar material, students also misunderstand or completely miss what is being said by an instructor.

At a minimum, audio listening solutions often include ideally mounted speakers, a small amplification system and a microphone for instructor use. Additional items may include audio inputs for computers/video devices/audio sources, a microphone for student use, etc.

The district's Special Education department has suggested that the district evaluate the use of such systems within the classroom for those who are hearing impaired. Traditionally, impaired students are singled out for their disability or impairment. While this is often to the embarrassment of impaired student, this is sometimes to the detriment of other students as well. Perhaps a student that requires being closer to the front of class due to vision issues is moved backward to facilitate a student with auditory problems. By utilization of an audio listening solution that integrates speakers within the classrooms, all students and instructors may benefit.

9.3.9 Wireless Tablets/Slates

Slates can be utilized to enhance the classroom experience of those who use interactive whiteboards. However, there are areas in which slates sometimes are not best such as early elementary classrooms. The early elementary grades usually require teachers to closely interact with their students. These very young students also tend to interact with whiteboards more easily than tablets due to the hand-eye coordination required to write on a slate while looking at the screen at the front of the classroom.

Other areas where the coupling of interactive whiteboards and slates often do not work out are in most higher grade levels. For higher grade levels, students are usually more apt to using a slate to interact with the image projected on a standard projection screen, dry erase board or wall. In some classrooms, students are not as free to go from their desk to the front of the classroom. In such a scenario, slates may be used to allow students to interact from their desks.

Teachers are allowed more mobility in classroom settings utilizing slates. Slates allow an instructor to manipulate the screen or computer while roaming around a classroom. For instance, a teacher may stand near noisy/problem students to cut down on chatter while still manipulating materials and teaching their lesson unabated.

There are a variety of slates available in today's market. Some of these slates offer the ability to use multiple units simultaneously to allow students to collaborate in groups.

Some slates can also be paired with classroom response units. Such units allow the instructor to pose questions, access question banks, see realtime results on their tablet, etc. Options exist to tie some slates into the ExamView software question and test banks used within the middle-high school.

Slates can also be outfitted with audio/visual and computer screen capturing functionality. Using this capturing alternative, a teacher can prerecord a lesson prior to taking leave of any sort. The teacher's substitute can then play the recording for the class. This allows the teacher to "teach" the class material while not physically present. The teacher does not have to be concerned with whether or not the substitute will teach any material in the proper way. All screen annotations, videos and audio are presented to the class as if their teacher were with them. These recordings can also be posted to the video portal for review by students prior to exams, for review students that have missed a class or as future instructional material for upcoming years/classes. Note, this can also be achieved by the use of cameras as outlined elsewhere in this document.

The district is currently evaluating the utilization of slates within the classroom. As stated earlier, there are some environments that do not sensibly merit the use of a wireless slate. There are other areas that, while not meriting use of an interactive whiteboard, can still make exceptional use of a wireless slate(s). Still, other areas exist that can benefit from the combination and integration of a wireless slate and interactive whiteboard. It is the desire of the district to discover these opportunities and provide the needed tools for each.

9.3.10 Mobile Labs

A mobile lab consists of a lockable rolling cart that houses a large number of laptops and power adaptors. Combined with wireless connectivity throughout the district, this mobile lab allows teachers to quickly provide computers to students in the classroom.

For additional information, please refer to 7.3.9 on page 19.

10 Technology Dimension 4: Community Connections

GOAL:

Use technology, including assistive technology, and digital information systems to maximize community involvement and community partnerships and to increase student achievement.

10.1 Snapshot of Current Technology Use in District

The scarce accessibility of computers for students is problematic since many of our students have no Internet connectivity at home. This prevents them from such activity as completing projects. With the use of wireless netbooks, both students and parents can become involved in the instructional activities of the school. This could be accomplished through use of a student netbook check-out program.

Cooperative efforts between parents, community stakeholders and the academic achievement of students is needed. According to SC Kids Count's 2008 report for Clarendon County, a child's success is strongly influenced by the education of their parents. In 2006, 103 babies (25.9% of all babies), were born to mothers of all ages who had not completed the 12^{th} grade. In 2006, 24.2% of White and 26.9% of African-American and Other babies were born to mothers who had completed less than the 12^{th} grade. This is a substantial improvement from 59.4% in 1970. In addition, during 2006, 31.4% had completed 12 grades (26.1% of Whites and 34.7% of African-Americans and Others) and 41.2% had more than a high school degree (48.4% of Whites and 36.7% of African-Americans and Others).

A tremendous focus on family technology events infusing technology awareness, college/career awareness and informing parents of student achievement must happen. Communication with parents is needed to see substantial growth allowing parents to become intimately involved in the technology skills and academic achievement of their children. Community stakeholders can continue in these sessions and can contribute to the academic achievement by providing mentoring and awareness discussions on what to expect in the workforce in the use of technology at these family events.

10.2 Overall Goal for This Dimension

Technology, within the confines of a school's walls, merely begins building the blocks for future success. However, due to the economic conditions affecting our district we have identified a grave need for more than what the school day can provide. By expanding technology resources to the community through the use of computer loan initiatives, plans for a public Wi-Fi park, after hours computer training seminars for continuing technology education, and fostering a district-wide library system, we can achieve this goal. By reaching out to our community, we can plant the seeds of technology to the benefit of all community citizens.

A school district depends greatly on the community in which it resides. Through additional community outreach projects, internships, business partnerships, and an enhanced interactive website presence, the district hopes to offer more than required instruction occurring each day behind the school's closed doors.

10.3 Objectives, Strategies, and Action List to Reach Goal

Below you will find the action list for this dimension outlining the individual steps necessary to achieve the strategy or goal. It is organized into corresponding sections and subsections. Following each action item, a description of that action item is included. These may include information about the software, implementation, strategy or other various notes. These sections are referenced in subsequent order by corresponding outline numbers. Generally, all references are hyperlinked for ease of navigation throughout the document.

10.3.1 NetBook Loan Initiative

Our current student computer ratio of 1:25 in our classrooms is based on each site having a computer lab. Our teachers have computers in their rooms; however, these are antiquated making it difficult to incorporate newer streaming video and web content into lesson plans. Based on survey results, the scarce accessibility of computers for students is problematic because many of our students have no Internet connectivity at home to complete projects. With the use of wireless notebooks both students and parents could become involved in the instructional activities of the schools through a student netbook check-out program.

Currently, we are utilizing an E2T2 grant to allow checkout of netbooks for off premises use. The netbooks offer children experience with computers. However, the added requirement of Internet access is necessary for that experience to become effective. One of the major difficulties with this initiative is that many students lack Internet access outside of school. With a lack of public Wi-Fi access points in the area, there are not many opportunities for these students.

10.3.2 Wi-Fi Park

To mitigate the lack of Internet connectivity, we wish to establish an exterior "park", preferably covered from the elements, with power and public Wi-Fi available in the general vicinity. This access would reside on a separate network from the school, but would utilize the school's Internet connectivity for access. We would set up a captive portal. This would force users to a homepage where they would agree to terms and conditions. It would possibly require student credentials to access

The agriculture class could be utilized for landscaping and general beautification efforts of the park area.

10.3.3 Website

Clarendon County School District Three has maintained a public website since 2004. The website has undergone several redesigns during this period. However, it contains only minimal and generally static content. We would like to increase the visibility of the website, increase available content and resources offered, and position the website as a more effective media dissemination of information and student/faculty/teacher/parent interaction. Information regarding district wide testing results would also be showcased on the website.

We would like to encourage and promote that each teacher maintain individualized micro-sites for their classes. They would use the website to disseminate pertinent class information and showcase student achievement.

In order to facilitate this initiative, we have contracted with a third party vendor, Echalk, to provide website hosting and content management system functionality.

Webvantage Features - School and District Websites
Build websites quickly and affordably with a content management system designed specifically for K-12 school systems. Eliminate outdated or hard-to-maintain systems and improve your image and community relations.

- Customizable Domain/URL
- Website Hosting
- Customizable Design Templates
- Custom-Designed Banner Graphics
- Layout Manager
- WYSIWYG Text Editor
- Rights Management System
- Scheduled Content Publishing/Removal
- Hierarchical Publishing Capabilities (i.e., District, School, Department, etc)

- Automatic Translation (34 Languages)
- Announcements
- RSS Feeds
- Surveys
- Directories
- Site Search
- Calendars
- Web Traffic Analytics
- Weather Forecasts
- Maps/Directions
- Usage Statistics/Reporting for Administrators

10.3.4 PowerSchool Portal

Online resources provide the district with many ways to involve the parents and guardians of students. PowerSchool is a web-based student information system that allows parents and students access to real-time information, such as like grades and attendance, and provides a secure way to communicate with teachers from home. With the implementation of PowerSchool during Q1 2010, communication between teachers and administrators and parents is greatly enhanced. Teachers and administrators can communicate directly with parents. Likewise, parents can check on student attendance, grades, or disciplinary items at any time. Parents can also send messages back and forth among their children's various teachers. This will provide both parents and teachers a much higher level of accountability, which until now has not been available.

Benefits of the PowerSchool Portal:

- Allows for more collaboration among instructors/staff in regards to information about students.
- Allows for more collaboration among staff and parents.
- Allows for more collaboration among staff and students.
- Web based - lessons the support burden for end-users.
- All in one solution - a single system for our district to maintain which houses all school information.

10.3.5 After Hours Computer Training

Clarendon County School District Three has made application for Partners And Coaches for Technology (PACT), in partnership with Spartanburg County School District 3 will create a 21st Century District learning atmosphere that launches the integration of technology in the classroom, promotes professional capacity through intensive, ongoing sustained professional development, monthly staff development sessions and symposiums specifically designed to use the ePortfolio system to increase teachers', administrators', and media specialists' technology proficiency levels and to assist them with improving instructional strategies; improving student achievement through use of research-based technology integration aligned with state standards.

A tremendous focus on family technology events infusing technology awareness, college/career awareness, and informing parents of student achievement must happen. Communication with parents is needed to see substantial growth allowing parents to become intimately involved in the technology skills and academic achievement of their children. Community stakeholders can continue in these sessions and can contribute to the academic achievement by providing mentoring and awareness discussions on what to expect in the workforce in the use of technology at these family events.

10.3.6 Free Will Baptist Home For Children

As a community outreach project, the district works with the Free Will Baptist Home for Children, located at 5232 Turbeville Highway, Turbeville, SC 29162, to provide technology resources and learning tools to students and dorm parents. The Free Will Baptist Home for Children is the only orphanage in Clarendon County. Providing technology resources to the facility is important to maintain good will in an often neglected segment of the community. The district supports the facility directly and indirectly through technology, equipment, maintenance, and support.

Funding for this effort is provided through Title 1 funds, as part of The Neglected and Delinquent Children Program

10.3.7 Internships and Work Study Programs – Business Partnerships

Clarendon County School District Three has no direct industry in the surrounding area.

The largest technology oriented business within the district is Farmer's Telephone, a local telecommunications cooperative.

Bezaleel Design and Technology Group, a local Information Technology Consulting firm based out of Lake City. They currently provide internal support for the district's internal networking, infrastructure and technology needs.

Coker Business Systems is a provider of high-end business printer sales, service, and support. The largest Kyocera dealership in South Carolina with an established customer base of nearly 3,000 members.

In order to facilitate additional business partnerships, it may be necessary to look outside of the school district to fulfill this need. Relying on web cams, email, and web training with additional businesses outside of the district may be necessary to bridge this gap.

The school district has already begun utilizing the Cisco Technology class to provide training and instruction using internal deployment of infrastructure as a learning tool. This includes instruction on cabling and networking, CAT5-E termination, testing, cable tracing, and projector installations within the district. We would like to continue this initiative and potentially expand it into a more hands-on program.

10.3.8 Expanding Library Services

Turbeville does not have a public library system. The nearest public libraries, available in Olanta and Manning, are more than 14 miles outside of the city. To mitigate this lack, we are considering allowing non-students to make use of the East Clarendon Middle-High School library system. Evaluation is ongoing to determine the feasibility and the practicality of offering such a program. Main concerns may include funding for additional library books, equipment, and resources to fulfill this need. It may also include after hours availability to the public community that may require additional staffing.

10.3.9 Library Consortiums

We are currently evaluating a replacement for the existing library system, Spectrum. One of the proposed alternatives is Evergreen. The Evergreen product has specific functionality that is geared for consortiums and allows for easy lending of books to and from the associated library system. A number of surrounding library systems utilize this program, such as Florence, York, Anderson, and Dorchester and there exists a consortium called SC LENDS through the State Library.

In addition to not having a local public library, there is a continual shortfall in the school district to provide sufficient diversity and inventory of books and other library resources. A lending program could greatly mitigate these concerns and provide the district with additional resources.

The vendor has suggested that this might be a viable option, but eligibility has not yet been determined. Specifically, there are questions regarding whether the district could participate. If the program requires reciprocation, practical concerns such as the handling of delinquent returns, lost books, and fines would need to be addressed.

10.3.10 Accelerated Reader Home Connect

Another resource available to parents is the Accelerated Reader Home Connect website. This software allows parents to track the progress of their children within the Accelerated Reader program. Parents may elect to receive email notifications any time their child completes an Accelerated Reader quiz or activity. Using Home Connect, parents can see test scores, a list of books read, and assist their child in searching for the next book to read. As the district makes plans to possibly use the Accelerated Math program, additional access will become available using the Home Connect resource.

10.3.11 Alert Now

AlertNow is a "robo caller". This service allows administrators to record announcements, alerts and other notifications. Once these messages have been recorded, the administrators can then send them to various groups via phone. School outages can be relayed to parents and students. Meeting alerts can be sent to other administrative or faculty groups. The service provides an easy method to record a message once and then to send it to multiple participants.

The use of a "robo caller" provides a method of communication via phone to parents so that that do not have SMS messaging, email, instant messaging, or Internet service to access the district's website.

11 Technology Dimension 5: Support Capacity

GOAL:

Expand and support technology resources to assist educators and learners in attaining 21st century skills and meeting the state academic standards.

11.1 Snapshot of Current Technology Use in District

11.1.1 Connectivity

A high speed network is the lifeblood of connectivity and internet support services for teachers, faculty, and administrators. Many of our administrative and educational services are provisioned through the network or internet. Teachers and students need high-speed broadband access in order to take advantage of a wide range of new and rich educational tools and resources available for learning anytime, anywhere. A high speed network is vital for modern communication, such as email, instant messaging, etc.

11.1.1.1 District Internet Connectivity

The Internet connection provided by the South Carolina State Department of Education consists of a single 10MB T1 Internet line. This T1 line is terminated at the high school server room. The district backbone connects to the T1 via a firewall appliance.

11.1.1.2 School Interconnects

From the high school server room, each site is connected to the district backbone via fiber optic cable. This does not include Walker Gamble Elementary School, which is connected to the district backbone via a 100MB Metro Ethernet connection. Each connection to the district backbone is terminated to a site firewall appliance that controls that specific network.

11.1.1.3 Network Connectivity

The district backbone is connected via Gigabit (1000T) connections.

95% of the computers within the district are connected to the network and Internet.

Desktops are connected to the local network backbone via 10/100T network connections.

Servers are connected to the local network backbone via 100T or GigE (1000T) connections.

11.1.1.4 Wireless Connectivity

- ~70% of District Office has wireless coverage
- ~90% of Walker Gamble Elementary School has wireless coverage
- ~90% of Grades 6^{th} thru 8^{th} of East Clarendon Middle-High School have wireless coverage
- ~60% of Grades 9^{th} thru 12^{th} of East Clarendon Middle-High School have wireless coverage

11.1.2 Computers

The district approximately owns 650 desktops and 100 laptops.

11.1.3 Previous Goals

1. By the year 2008 each classroom will have 10 computers all network accessible.
2. Upgrade servers at each location.
3. By the year 2008 wireless networking will become a norm throughout the facilities.
4. By the year 2008 classrooms will be equipped with projectors, interactive boards, and e-books.
5. By the year 2008 teachers will have laptops to work anywhere.

11.2 Overall Goal for This Dimension

Technology, although an important tool, requires upgrades in infrastructure, equipment and support to remain current. Over the past five years, efforts to enhance the network and usability of district technology resources have made excellent progress at bridging technology gaps within our district. Yet, there is still so much more to do to achieve this goal completely.

Implementing policies, procedures, and determining optimal hardware refresh cycles will help further the progress towards this goal.

However, cost and funding is a major consideration for all action items within this dimension. Through energy saving initiatives, waste reduction, resource management, donation policies, centralization strategies, and free software solutions, we will attempt to mitigate gaps in funding for achieving the goals set forth in this dimension.

Some of the overall goals include:

- Wireless Coverage = 100%
- New District Office Facilities
- Increase Connectivity
- VOIP Phones
- Cut Costs
- Centralize
- Backups
- Policies

11.3 Objectives, Strategies, and Action List to Reach Goal

Below you will find the action list for this dimension outlining the individual steps necessary to achieve the strategy or goal. It is organized into corresponding sections and subsections. Following each action item, a description of that action item is included. These may include information about the software, implementation, strategy or other various notes. These sections are referenced in subsequent order by corresponding outline numbers. Generally, all references are hyperlinked for ease of navigation throughout the document.

11.3.1 Hardware Refresh Cycle

The SC state guidelines recommend replacement of computer hardware every 3-5 years in order to achieve moderate to high efficiency. A significant amount of our infrastructure does not fall within the recommended range and should be replaced.

The district is experiencing increased enrollment. A significant number of these students are in the grade school level. The majority of our technology requirements increase as students advance through to higher grade levels. This will require additional computers in order to maintain existing student to computer ratios.

State guidelines recognize that technology is a key to educational progress and preparing the 21st century workforce. As such, they request higher computer to student ratios. The school district, as with most state departments, are experiencing funding shortfalls. Due to increases in enrollment and class sizes, it is our plan to more aggressively obtain computers, focusing on those machines that are mechanically unsound or mechanically failed, first.

We do not foresee the funding to replace the legacy (5+ years) hardware.

As such, we plan to focus on several efforts:

1. Increase technology through technology donations
2. Redistribute hardware based on technology needs
3. Utilize thin client and client/server technology

11.3.1.1 Technology Donations

The state technology plan outlined using businesses to help fund technology initiatives. We plan to use direct donations of hardware from businesses, as a method of increasing overall available computer resources.

1. Create a computer donation policy outlining acceptable specifications for computers and develop methodology and guidelines for tax deductions for donations. Please see Donation Policy, 11.3.1.1.
2. Determine methods and marketing materials in order to solicit donations in a professional and business-like manner.
3. Develop methods of recognition for donations and support (promotion on website, school newsletters, and yearbooks).

Another avenue of acquiring donations would be utilizing the US General Services Administration program, ComputersForLearning.org, executing Executive Order 12999. Government equipment is donated on a first-come/first serve basis, requiring the payment of shipping and handling charges only. The district can acquire monitors and computers through this program for minimal associated costs.

11.3.1.2 Redistribute Hardware

We plan to distribute hardware based on technology needs to ensure that roles requiring higher performance and increased computing requirements receive newer, faster computers with more resources following the below hierarchy:

1. Technology Personnel
2. Administrators
3. Teachers
4. Labs
5. Libraries
6. Classrooms

This distribution model does not affect computers purchased for a specific role or funded with specific goals in mind.

Centralization, ease of deployment, automation and maintenance are required in order to effectively handle donations of heterogeneous equipment, to quickly redistribute and repurpose computers throughout the district.

11.3.1.3 Client/Server Technology (Thin Client) Thin client technology utilizes desktop machines with minimal hardware in which all applications and desktop environments run via the network from a centralized server. All the application and processing overhead occurs on the server level. As such, the equipment at the user end essentially functions as a remote keyboard, mouse and monitor utilizing only a fraction of the resources normally required by a full standalone computer.

Microsoft states that by using thin client technology along with their software, the following can be expected:

- Reduced network administration costs (55% savings)
- Less "informal administration" such as workers spending time to help co-workers with technical issues (14%)
- Lowered hardware acquisition costs (13%)
- Easier deployment of application software upgrades (11%)
- Lowered operating-system upgrade deployment costs (3%)

The Gartner study shows that there is a 48% reduction in cost on the Microsoft Windows platform by moving it from an unmanaged PC environment to a centralized design with thin clients.

11.3.2 Centralization

When services are centralized, management and administration of services becomes easier. Thin clients by the very nature of being server-based automatically means that services become centralized. This ensures that upgrades and changes can be completed once and in one place for the entire organization, rather than having to update every user's desktop in order to complete a required change.

Centralization also eases the burden of backups, offers a time savings for administration, and reduces the points of failure even though it can increase the damage that can be experienced with an outage. With centralization, we can easily develop appropriate methods of adding redundancy. Whether this is making sure that everything is backed up or having a standby server ready to take over in case of an emergency, having all critical systems in a singular system facilitates quick turnaround in the case of an emergency or other failure.

11.3.3 Repurposing Equipment

By using a centralized server, equipment that would otherwise be deemed antiquated by commercial vendors can still be used adequately in the thin client environment. Through repurposing and reusing existing hardware, organizations can greatly reduce the amount of waste associated with replacing older equipment. This "recycling" of older hardware reduces the costs involved in the refurbishing or the replacing of aging hardware. This recycling avoids the need to purchase newer machines simply to run the newest commercial operating systems.

11.3.4 Policies & Procedures

The district will development and monitor District technology policies and procedures that ensure alignment, equity, and support for student achievement goals defined in the East Clarendon School District Three's strategic plans.

The District has adopted the standards developed by the International Society for Technology in Education's (ISTE), National Education Technology Standards for Teachers (NETS-T), and National Education Technology Standards for Students (NETS-S). We should align our policies and procedures to ISTE standards.

11.3.4.1 Data Storage Policy
Designation of items that are personal in nature and items that are business related. All items should be centralized in order to have consistent conventions which bolster communication and knowledge between individuals.

11.3.4.2 Software Policy

We need to develop software policies for the district. This will allow standardization of applications, reduce overall application support, and make it easier for the technology staff to deploy and maintain.

1. Generate a list of free software and commercial software that is allowed within the school district.
2. Define a methodology for submission and evaluation of new software.
3. Develop asset management and storage strategies for obtaining all licensing and associated media and instructional manuals.
4. Develop guidelines for software that is purchased by faculty and staff.
5. Determine methodology for software installation requests. This could include approval and purchasing departments.

11.3.4.3 Acceptable Use Policy

As technology continues to change, the district's technology related policies need to change as well. The district revised its acceptable use policy for the beginning of the 2008-2009 school year. Since this revision, the district has had time to further reflect on areas addressed within the document. Various items have been noted for evaluation for updates or additions.

Updates to this policy may include the following items:

- Utilization of computer resources for tasks other than learning. Example: printing personal documents, installing SETI programs and other distributive computing applications that utilize CPU resources.
- Cellular phone usage.
- Texting.
- Broaden unauthorized access.
- Probing.
- Port scanning.
- Attempts to bypass security.
- Measures to bypass Internet filter.
- Specifically disallow third party proxies.
- Disallow non-district related VPN and remote access.
- Disallow peer-to-peer and file sharing.
- Expand the AUP to include Internet devices and personal property on premises.
- Update safety guidelines.
- Expand social networking websites to include Facebook, Twitter, LinkedIn, etc.
- Increased monitoring – All activity on district network can be monitored, reviewed, and revoked.
- Wireless access policy to include specific times and usage guidelines.
- Must adhere to district code of conduct policies.
- Consider merging all AUPs into a unified policy.

11.3.4.4 Faculty & Staff Acceptable Use Policy

The acceptable use policy should specify that the use of resources is for company use only. Such resources should be used during company hours for company work only. Resources should not be used for personal use, communication, printing, etc. Clauses are required for legality issues, such as: no pornography, nothing illegal, no illegal or unregistered software, nothing immoral, etc.

The policy should also state that the company reserves the right to police, monitor and enforce these terms at all times. The policy should make notice that data and information should not be copied off site. The policy should also address issues related to data use and the employee's responsibility concerning it.

Currently, a policy specifically concerning teachers, faculty and staff has not been developed.

- Create policy.
- Distribute policy.
- Sign off on policy, annually.

11.3.4.5 Email Use Policy

The email use policy should be expanded to cover this usage area more completely. Updates to this policy may include:

- Spamming is prohibited.
- Solicitation is prohibited.
- Mail bombing is prohibited.
- Maintain good sense when using distribution lists.
- Email senders should be designated as real, identifiable persons – not anonymous or as someone else.
- All communication, regardless of purpose, should be conducted in a professional manner, fitting to business.
- All communications should include the standard district approved signature/disclaimer information:

Clarendon County School District Three provides employee e-mail access for administrative and instructional uses only. E-mail correspondence to/from Clarendon County School District Three is considered public information and is subject to release under the South Carolina Freedom Of Information Act or pursuant to subpoena.

- If district machines, Internet, or network is used during the school day, all external email through third party sources must adhere to the district email, associated AUPs, and code of conduct policies.
- All email that uses district email addresses must originate from the district mail server. We do provide webmail for external access.
- If district email address is used to signup on other websites or to post on forums, all activity must still abide by all policies and procedures set forth when representing the school district.

11.3.4.6 Security Guidelines

The security guidelines should address issues such as: creating good/strong passwords, password rotation schedules, all current passwords should be given to Systems Administrator, and that passwords should not be written down or shared with other employees. Each user name and password uniquely represents a particular employee or student and as such, if there are any logs, etc using their user name and password, they are ultimately responsible for actions taken.

The company employee intake and terminate policy should provide a checklist that is used to ensure that all accounts are created within a specific process. An informational package is given to each employee to sign and enforced by the company. Terminations should take note of deletion of accounts, data archival, processing of data and deletion of non-pertinent information.

11.3.4.7 Computer Donation Policy

The District would like to utilize donations in order to help offset our Computer Refresh Cycle. As such, we must develop a computer donation policy outlining acceptable specifications for computers (modern, meeting educational guidelines), monitors (such as LCD only), software licenses, and privacy/security (Department of Defense Short or Standard wipe of hard drive) .

The District will also need to develop methodology and guidelines for tax deductions for donations.

11.3.5 New District Office Facilities

11.3.5.1 Server Room

Previously, all district wide facilities were not designed or implemented with modern computers, infrastructure, wiring, and associated power demands in mind. Most prior "server" rooms were unused closets, bookrooms, and electrical cubbies. In many cases, these mixed use spaces were not climate controlled, without required ventilation, or proper power. Power inadequacies alone in these rooms accounted for more than 90% of the district outages over the course of the last 4 years.

With the new district office construction, we were given the opportunity to create a modern server room environment with an eye towards cost. This additional cost was approved by the district administration and school board. The district office server room has enough space to house the majority of the computer infrastructure for the school district. With the addition of the the 12 pairs of fiber to the middle/high school, this provides the opportunity to migrate most servers to the dedicated server room at the district office. Such centralization, also allows us to backup or provide fail-over services to the server room.

This second site is important in provisioning for disaster recovery and increased physical security (less staff with access to the building). It also provides the opportunity to stream security camera data off-site.

11.3.6 Wireless

11.3.6.1 Merge Middle School and High School Wireless Networks

At the beginning of the 2009-2010 school year, the middle school and high school merged into a single school, East Clarendon Middle-High School. This merge allows the resources of both to be used collectively, reducing overhead and redundancy.

Previously, these schools had separate network systems, behind separate firewalls. This included the wireless networks. We have found that the mobile labs have been more fluid in where they are utilized. They might be used in one network one moment, but soon migrate to another network as they move from location to location.

Currently, this movement requires switching network configurations in order to move between the wireless networks. These segregated networks need to be merged together into a seamless networked system that the same wireless configuration can be used throughout the school.

11.3.6.2 High School Wireless

The school district has a large wireless footprint, utilizing Cisco wireless access points, with the exception of the High School's wireless network. When the high school building was constructed in 1952, it was constructed with many thick masonry walls. Currently, the wireless access in this building is provided by a mishmash of consumer grade wireless access points. These access points do not provide an adequate saturation of signal strength to all areas of the school. Due to the consumer grade products used, each node is independent, the channels are not segregated for overlapping signals, and the overall footprint and quality is sub-adequate.

We would like to upgrade the wireless facilities to commercial grade equipment that is better suited for the needs of the district.

11.3.6.3 802.11N

When purchasing future wireless access equipment, we would like to support the 802.11N standard. This signal allows significantly increased aggregate traffic while supporting higher numbers of clients. In order to maintain pace with growth and increased bandwidth needs, we plan to begin purchasing equipment that supports this standard.

Potentially, the greatest benefit of utilizing this standard is how this wavelength passes through building materials, especially masonry. This may allow a lower access point density while providing better overall signal quality.

11.3.6.4 Wireless Security

Currently, the wireless access is unencrypted and is "secured" by unadvertised SSID. Not advertising the SSID does not increase security. However, it can increase chattiness on the network and degrade network quality and stability.

All wireless access needs to be provisioned to utilize WPA-2 Enterprise level encryption and to advertise an SSID for reliability.

11.3.6.5 Segregation of Wired vs. Wireless Networks

Currently, the wireless and wired networks are commingled on the same IP address subnet. This allows traffic to easily flow from one to the other. We want to segregate both networks and disallow traffic routing between the two. Communal network resources should be available via a third network that both wired and wireless networks can access.

Segregation of the networks allows the application of port blocking, quality of service, better control, management and fine tuning of the resources.

11.3.6.6 Increase VPN Utilization

For additional security, fine tuning of access and routing, we would like to see VPN technology employed throughout the district. Employing individual VPN access certificates to each employee in order to uniquely and securely identify users would be ideal. This allows for more finely tuned access control lists (ACL) for network resources.

11.3.7 Mass Deployment Strategies

The district has approximately 750 computers maintained by internal IT staff. New equipment is constantly being added to the infrastructure. As such, mass deployment strategies are imperative to maintain homogeneous workstation roll outs for efficient operations.

In the past, each workstation was individually configured through non-automatic means. Due to the amount of effort involved, machines were not upgraded to the newest software and update cycles were improperly maintained. Workstations had many different versions of software applications and unapplied updates. This practice hampered standardization. If a machine was not broken, it often did not receive proper attention and maintenance. This resulted in a significant amount of collected junk data and unapproved software installations.

11.3.7.1 Multi-casting of Hard Drive Images

In order to quickly deploy a bare metal hard drive image across heterogeneous machines, we need to efficiently utilize network deployment strategies. Each hard drive image represents a significant amount of data. "Normal" network deployments would transfer the amount of data multiplied by the number of machines which can cause significant degradation of the network and extreme delays in deployment. The most efficient method to deploy over the network is utilizing multicasting functionality to send the data once to all workstations requiring re-imaging.

By utilizing open source software and custom programming, combined with bootable network images (PXE) and various bootable media (CDs and USB thumb drives), we have built a multicasting deployment methodology.

11.3.7.2 Automatic Software Installation

Previously, software was manually installed at each desktop, not allowing for quick, efficient, and standardized installs across the network. We created automatic scripts to install software, install updates, change configuration settings, create users, and map resources. This allows quick deployment and automation of software and polices throughout our infrastructure.

11.3.7.3 Lock Down and Security

Previously, the majority of computers maintained by the district had administrative privileges granted to all users. Many users were utilizing administrator logins for day to day use. Everyone had full access and could make any changes desired to the computer, including installation of unapproved software. This caused maintenance issues, standardization issues, and security issues. It also complicated district policy enforcement.

A recent study showed that nearly 80% of all Windows related security breaches could be mitigated by not running day to day operations with administrative privileges. This is significant risk mitigation and greatly reduces the potential of widespread infections, worms, and hacking.

11.3.7.4 Re-image Workstations

In order to implement many of the preceding action items, we required a new start with a fresh install. In order to accomplish this, we plan to perform the following actions on all teacher, staff, and student workstations.

11.3.7.5 Backups

To provide a safety net and to ensure that important data is not lost, a bare metal backup of every machine should be performed prior to re-imaging.

To this effect, we developed an in-memory operating system image that could be deployed from network booting (PXE) or local media such as CD's or USB thumb drives. This software would perform various auditing functions on the computer and generate reports on a centralized server. This utility would notify the central server and wait in a queue until the backup server provided the green light to begin the backup process. Once the backup server initiates the backup on the workstation, the client would proceed to backup all partitions on the local hard drive to the server using secured and encrypted connections. This allowed the server to manage the number of concurrent backups occurring in order to optimize bandwidth and automatically process all computers on the network.

11.3.7.6 Re-imaging

To re-image machines, we utilized a similar methodology as utilized by the backups. Specifically, using an in-memory operating system image that could be deployed from network booting (PXE) or local media such as CD's or USB thumb drives. It would automatically format and partition each workstation hard drive. Utilizing the previously developed multicasting style data transmission, data would be efficiently transferred through the network. It would grow the partition in order to use the available hard drive space allowing for deployment on any hard drive size or geometry. It would also install a master boot record (MBR) to make the drive bootable.

The deployed image would have an auto-start script to allow further customization and setup. Please see the Automatic Software Installation section for more information.

11.3.7.7 Migration of Data to Network Shares

In addition to manually copied data, we developed scripts that would evaluate and locate important data from the backup images to automatically create a compressed archive of important user data that was migrated to the centralized file server.

11.3.7.8 Mapping Network Resources

For centralization and simplified backup, all data was migrated to a central file server and various network shares were mapped to more transparently utilize the centralized network resources.

11.3.8 Cost Cutting Initiatives

11.3.8.1 District Office Fiber Interconnect

With the new district office facilities, completed Q4 2009, the connectivity of the building was previously provided through MetroEthernet, with local telco provider Farmer's Telephone. This service has a recurring monthly expense associated and was paid through e-rate funding via the state contract.

We evaluated and a provisioned dedicated 12 pair fiber interconnect to connect the district office to the East Clarendon Middle-High School. These lines are privately owned by the district and have no associated recurring costs. In addition to the lower cost, it provides significant bandwidth increases, lower latency, more control, and additional opportunities.

11.3.8.2 Software Consolidation

Potential Redundancy

In assessing the software owned or licensed by the district, several software packages were noticed as serving very similar roles. While such similarities may not always warrant consolidation, they do warrant consideration. These packages should be reviewed and evaluated for redundant functionality and purpose.

Individualized Instructional Software

- Orchard
  - Owned and used at the Elementary School
  - Owned, but unused at the Middle School
- PLATO
  - Owned, but unused at the Middle-High School
- Compass Learning Odyssey
  - Owned and used at the Middle-High School
  - Offers materials for Elementary grade levels
- Help Me 2 Learn: Super Star
  - Owned and used at the Elementary School

Potential Alternatives
Other packages or vendors were noted for providing similar offerings. The district may evaluate these offerings to determine if the alternative solution is a cheaper solution (Does it lower our total cost of ownership?); provides better effectiveness (Does it do the job as well as or better than the current solution/service?), and provides similar ease of use (Does it fit into our environment easily?).

Credit Recovery

- ApexLearning
  - Licensed annually and used at Middle-High School
- Compass Learning
  - Offers credit recovery
- PLATO
  - Offers credit recovery

11.3.8.3 Save Energy

According to the Department of Energy, K-12 school districts spend more than $6 billion annually on energy — more than is spent on computers and textbooks combined. As much as 30% of a district's total energy is used inefficiently or unnecessarily.

Lights: It is recommended that light bulbs should be replaced with more energy efficient equivalents, such as compact florescent, LED, or low heat halogen options. Replace the Exit sign lights with corresponding LED versions to save energy. Florida's Brevard school district saved over $100, 000 just by making a similar switchout.

Operating System Power Management: The majority of computers within the district do not utilize any power management settings, including on monitors. We would like to pursue a green initiative to reduce the total electrical cost by setting each computer power management to put the computer and monitor into a reduced energy state when not in use. This would have very little noticeable impact to users, but could greatly affect electricity costs.

Some older hardware may have difficulty with power management (ie. not coming back cleanly after hibernating). For those machines, we might just set only the monitor to a power savings mode or replace the units for more energy efficient units.

Various non-computer equipment also offer power saving settings. It is necessary to set these on an individual basis. A known need is to set all projectors to auto-off. There have been a number of incidences where a projector has remained on overnight or over a weekend. This increases overall costs, as both electricity and as projector bulbs are expensive.

Buying Green: As the district purchases new equipment, we should modify our policy in order to include "green" aspects in the buying decision. We are most concerned with the energy efficient aspects rather than the environmentally friendly aspects of "going green". The school district has a much longer lifecycle on most computer related machinery. As such, energy to operate becomes a significant factor in the total cost of ownership.

We should make a concerted effort to purchase products rated with programs and initiatives such as:

- **EnergyStar** – US Department of Energy energy efficiency rating
- **1 Watt Initiative** - when equipment is not active in use, it should use 1 watt or less in energy.
- **80PLUS** – computer power supply (PSU) efficiency, requiring 80% or higher efficiency converting AC to DC power.
- **TDP** – Thermal Design Power is associated with processors and video cards. More heat = more waste!
- **CPU Scaling** - Speed Step (Intel) or Power Now/Cool & Quiet (AMD)
- **Proper sizing of PSU** – Power supply units should be sized to achieve their highest efficiency at normal day-to-day workloads.
- **Passive cooling** – Large heat sinks that do not require active fans
- **Variable fan speed** – The fans change RPM in relation to temperature, rather than continually running at full speed

Generally, laptops are much more efficient in day-to-day utilization. We want servers to be highly efficient due to their constant usage. Less heat generated equates to less failures. We would like to utilize 80PLUS guidelines at the higher ratings (Bronze/Silver/Gold) for all servers.

CRT Monitors: CRT[7] monitors require 60% more energy than LCD units. They also generate a lot of heat. LCD[8] units have additional power management, energy saver modes, and are able to more quickly respond from sleep mode.

We have two methodologies for deployment:

1. Change out groups of monitors at a time
2. Slowly replace monitors that fail as part of the normal hardware lifecycle

Auto-Shutdown: Our computer resources are generally turned on constantly, but they are only needed during core school hours, which is less than $1/4^{th}$ of the total time. Turning on and off a computer does introduce slight wear, but this will be off set by energy savings.

We would like to run end of day maintenance on all computers automatically, based on role. This maintenance would most likely include various housekeeping such as operating system, application updates, virus scanner updates, full virus scans, deletion of temporary files, and defragmentation of local hard drive. We could also use this window in order to push out software deployments.

After this housekeeping is completed, the computer would automatically shutdown. This is also convenient for those updates that require reboot.

Under Monitor Power Strip: Using under monitor power strips would allow easy access to turn off monitors and all peripherals, such as speakers, lights, chargers, printers, etc. with a single button. This makes it convenient to turn off items that are not in use and eliminates phantom energy loads. These units also serve as surge protectors to protect connected machinery. This functionality could be accomplished by use of a regular power strip. However, the difficulty in using a standard power strip is that it is not as easy to access, users cannot turn items off per outlet, power strips can be hard to access, and they would generate clutter with so many plugs in an accessible area.

We currently do not utilize Uninterupted Power Source (UPS) units anywhere except for core server units. UPS units would be preferred, but they are significantly more costly to purchase and would require replacements every 2 years. We would recommend that the district purchase under monitor power strips for all teacher/classroom computer units. If funding allows, then every computer should have an under monitor power unit.

[7] CRT stands for Cathode Ray Tube and are the older more tranditional and deep screens
[8] LCD stands for Liquid crystal display and are the flat narrow screens.

Turn off Policy: The district should establish a policy to conserve energy at an individual level, by encouraging users to turn off all monitors, printers, lights, projectors (big one!), speakers, chargers, phones, and laptops before leaving at the end of day. This policy should become a daily part of their routine. We might also request that maintenance staff do the same, and allow for training of said staff to properly turn off computer equipment.

According to the Technology Council's calculations, turning off the district's 750 computers would save $84,000 each year! The Energy Council has also recommended an initiative utilizing students to help monitor energy conservation.

11.3.8.4 Open Source Software Solutions: A large cost factor for any computer environment is the cost of software to achieve the tasks of the environment's users. Upgrades and licensing fees can quickly increase the cost for an organization's computer systems. Current costs for such items as Microsoft Windows operating systems and Microsoft Office productivity software cost in excess of $300 per instance.

Upgrade cycles for these programs must be adhered to or the user may find their product no longer supported nor maintained by the developer. An example is Microsoft's Windows 98 operating system. This system is no longer supported nor updated by Microsoft. Deadlines for dropping of support from Microsoft for the Windows 2000 and XP line of operating systems have already been announced.

Open source alternatives bring many benefits in this regard:

1. Open source software is free of costs. The Gnu Public License (GPL) and other licensing methods used for open source software state that such software is to be made available to the public, free of charge. The only cost that might ever be encountered is that of having the open source software implemented.
2. Open source software licensing does not require that users must upgrade to a newer version of the software for support. Upgrading is often encouraged, however. If a software does its job today, with open source software constantly being improved upon, the level of enhancements continues to expand with each new release.
3. Many open source software products are updated regularly by their developers. The software is constantly being improved upon. With each release of newer versions, bug fixes, functionality and program enhancements are introduced to the software system. Open source projects tend to update and enhance their software at rates that rival or surpase their commercial equivalents.
4. Support for open source software is made available via forums, mailing lists, chat rooms and the like. Users are able to interact with developers and other users when in need of technical support. Commercial vendors are also available to provide support assistance.
5. Open source software may be distributed. By implementing open source and other various "free" software packages, the organization could legally and easily distribute certain software to its employees. If a certain program is necessary for work, an employee could obtain the same software for personal use at home...free of charge. This is a very important feature! Most employees and their families could not afford the $300 and above charge for a software program such as Microsoft Office, if they needed it on their home computer. Open source software could be prepared and easily distributed to employees via CD-ROM or via downloadable website links. It is easily accessible and obtainable.
6. Open source software reduces vendor lock-in. Because the source is freely available, products are often developed by multiple entities. Products are rarely end-of-lifed. The general public can sponsor development or develop certain software internally for their own use.

We are not trying to advocate a 100% conversion to open source applications to meet all of the district's needs. Leveraging open source applications to fill those jobs should be applied where it makes sense, is viable, and does the required task at hand.

There are applications where there may not be a suitable free alternative (such as name brand accounting or book keeping software). Constant evaluation of the software the organization uses is necessary to determine need based on merit. Where an open source equivalent exists, our methodlodgy would be to try the lower cost product as a potential solution. Thereby, saving the district organization additional funds.

11.3.8.5 Printer Standardization

We currently have a hodgepodge of printers throughout the district, with no standardization. Most of the printers in the teacher rooms are inkjet. We would like to standardize on a dependable, laser printer, preferably networked, offering cost effective high-yield toner and affordable replacement parts. Laser printers generally have a much lower cost per page. Therefore, a lower total cost of ownership.

This standardization would allow us to keep adequate inventory levels of consumables on hand. It offers greater opportunity for bulk purchase of supplies and offers the ability to evaluate refilling of toner internally to save even further on cost.

We have two methodologies for deployment:

1. Change out groups of printers at a time
2. Slowly replace printers that fail as part of the normal hardware lifecycle

It is more cost effective to provide black and white/monochrome laser printing than color laser services for supplies and demand. If color laser printers are offered, we may consider loading dual sets of drivers for these printers – one for black and white, the other for color. The driver settings would default to black and white to reduce superfluous color printing when it is not expressly warranted.

We should also consider putting color laser printers to share between classrooms, in convenient close proximity.

11.3.8.6 PDF Printer

Installation of a PDF printer as a printer option would allow users to create electronic versions in PDF format of any desktop application that they can print from. Users can choose the PDF printer instead of printing to hard copy for emailing and dissemination of documents without utilizing paper, toner, or other consumable resources. Electronic formats are also easier to backup, fulfill data retention requirements and is an important piece in disaster recovery.

Usage of PDF printing, also allows for the overall reduction of paper that finds its way into teacher mailboxes. If notices can be printed to PDF and disseminated to a school/district wide mailing list, the immediate reduction in labor and consumable resources would be tremendous and immediately noticeable. It will reduce the teacher's time away from the classroom. This would also allow better upkeep of the information received, by allowing keyword searches and organization of electronic documents based on personal staff preference.

Another consideration would be to store a single copy on a file server and notify staff members via instant messaging or email with a link to the single document. Instead of disseminating hundreds of copies, a single electronic copy becomes widely available as a file share. This would also allow for long term data archivial and the ability to review documents in a much easier format than keeping up with handfuls of notices and paper memos. This would also decrease the overall amount of data that it is necessary to maintain in a backup.

11.3.8.7 Forms

We would like to begin an initiative to convert existing paperwork forms into corresponding digital formats.

We would envision two main methods to accomplish this:

1. Utilize data collection via the website, using standard HTML forms.
2. Create editable PDF documents that utilize FDF (Forms Data Format) format.

This would reduce paperwork and consumables. The forms would be easier to modify when additions or changes are needed and reduce the amount of wasted paper copies resulting from updates. The forms would be easier to disseminate, allow for data retention, and reduce the amount of transcription that once was necessary with paper copies. With data in electronic format, data collection and collation becomes much simpler as well.

11.3.8.8 Digitizing Documents

The district has made an initial purchase of several automatic document scanners (Fujitsu SnapScan S550). The scanners come with OCR (optical character recognition) software, based on ABBY FineReader technology. We would like to reduce the amount of paperwork that is generated by initiating polices regarding digitalization of documents. This is extremely important with regards to data retention polices and disaster recovery strategies.

The above items would be utilized in order to reduce the amount of paper generated within the district, but the document scanners will also assist with documents from outside the school district. With proper scanning and organization techniques, documents that only one person may have access to now become available to everyone, without the need of photocopying multiple copies for all those that may need it.

11.3.8.9 Robo Dialing

Currently, we out-source to the third party vendor, AlertNow, for the automatic outbound dialing and messaging service (robo-dialing) for automatically notifying groups of individuals, such as parents, board members, office staff, and teachers of important announcements. This functionality was recently added in September 2009 and costs the district approximately $3.50 per student, plus additional costs.

We find that this could be a very powerful tool and as such would like to see further utilization. This service could be internalized using the existing teleco services. Alternatively, additional lines could be funded through e-rate monies to utilize free software products for this service. Many include confirmed receipt of the automatic phone messages. Moving this service internally could save the district nearly $5000 per school year. This could offset the cost of growing the service for additional students and allow for greater overall usage of the service.

11.3.9 Reduce Total Cost of Ownership

11.3.9.1 Thin Client Environment

Thin client technology utilizes desktop machines with minimal hardware in which all applications and desktop environments run via the network from a centralized server. All the application and processing overhead occurs on the server level. As such, the equipment at the user end essentially functions as a remote keyboard, mouse and monitor utilizing only a fraction of the resources normally required by a full standalone computer.

Microsoft states that by using thin client technology along with their software, the following can be expected:

- Reduced network administration costs (55% savings)
- Less “informal administration” such as workers spending time to help co-workers with technical issues (14%)
- Lowered hardware acquisition costs (13%)
- Easier deployment of application software upgrades (11%)
- Lowered operating-system upgrade deployment costs (3%)

The Gartner study shows that there is a 48% reduction in cost on the Microsoft Windows platform by moving it from an unmanaged PC environment to a centralized design with thin clients.

11.3.10 Centralization

When services are centralized, management and administration of services becomes easier. Thin clients by the very nature of being server-based automatically means that services become centralized. This ensures that upgrades and changes can be completed once and in one place for the entire organization, rather than having to update every user’s desktop in order to complete a required change.

Centralization also eases the burden of backups, offers a time savings for administration, and reduces the points of failure even though it can increase the damage that can be experienced with an outage. With centralization, we can easily develop appropriate methods of adding redundancy. Whether this is making sure that everything is backed up or having a standby server ready to take over in case of an emergency, having all critical systems in a singular system facilitates quick turnaround in the case of an emergency or other failure.

11.3.11 Repurposing Equipment

By using a centralized server, equipment that would otherwise be deemed antiquated by commercial vendors can still be used adequately in the thin client environment. Through repurposing and reusing existing hardware, organizations can greatly reduce the amount of waste associated with replacing older equipment. This "recycling" of older hardware reduces the costs involved in the refurbishing or the replacing of aging hardware. This recycling avoids the need to purchase newer machines simply to run the newest commercial operating systems.

11.3.12 Backups

Computer hardware by its very nature is going to fail. For most organizations, the loss of critical data can have disastrous results. In some circumstances, critical data loss can cause significant damage, loss of profits, and even loss of business.

In a normal computer environment, critical data can be scattered amongst servers, desktops, and systems. This can make implementation of a backup strategy that is complete, consistent, reliable, and valid difficult across an organization's entire computer infrastructure.

By using File Servers and Thin client technology, we are centralizing all data which makes it easier to develop a reliable backup strategy and greatly reduces worst case disaster restoration.

11.3.13 Licensing and Auditing

It is very important to ensure the legality of all software licenses, ensure that licensing terms and conditions are met, and that each license is used exactly once. The Business Software Alliance (BSA) can conduct audits on an organization's software legality at any moment. With fines and fees, an audit can be very costly to a business owner.

By locking down the desktops to acceptable applications and tailoring applications based on the overall role and job function, it is easier to guarantee that there will not be third-party or illegal applications installed on the network. This also stops users from installing unauthorized software.

12 Cumulative Targets and Benchmarks

12.1 2009

12.1.1 Spring 2009

- new ticketing system
- implemented new webmail system
- allowed users to change own passwords
- password rotation methodology
- issued individual OpenVPN certificates
- virtualization initiatives begun (file serving)
- centralized file serving and migrated all user data to file share
- Firewalls for each network
- Use of fiber interconnects between switches
- Use of "loops"? between switches
- Audit of network
- Audit of desktops
- Backup of all desktops
- Initial test of all desktop hardware??
- DNS caching
- Replaced faulty wireless AP at old District Office
- Replaced old 10MB switch at old District Office
- Implementation of initial phase Web Filtering solution
- See Board Reports
    - Spam Filtering
    - Network Audit
    - Software Audit
    - IT Knowledge Base / Wiki

12.1.2 Summer 2009

- Re-imaging of all student and teacher desktops
- Implementation of remote desktop software on each machine
- Implementation of limited user accounts on desktops
- Licensing compliance for Microsoft Office Professional
    - Only enough licenses on hand to provide access to:
        * District Office
        * School Administrators

    * High School and Middle School Labs
      Replaced non-compliant installations temporarily with OpenOffice.org open source productivity suite and Microsoft Office Viewers
    * Began process of acquiring funds for purchase of Microsoft Office Professional licenses for educators

- Implementation of new webmail solution
- Implementation of password change functionality via webmail interface
- Implementation of new technology department website
    - FAQ's, Blog, Calendar, Downloads, Forms
- Implementation of new Help Desk Ticketing System
    - Includes email functionality – alerts users/staff, monitors for email responses, provides tracking to end-users (teachers, staff, etc)
    - Provided district and school administrators access to ticketing system

12.1.3 Fall 2009

- Wiring addition to remote areas of Middle School and High School

  Roll-Out of CompassLearning, Interactive Instructional Support Software
    - Reused an existing Dell server for Compass.
    - Acquired license for required SQL Server 2008 software

  Roll-Out of MapTrakker Online Lesson Planning software for MS/HS
- Wiring of new District Office building: network and phone
- Migration of initial hardware to District Office server room
- Installation of fiber optic cabling between District Office and MS/HS campus (Demarc)
- Increase of bandwidth between Elementary School and MS/HS camps (Demarc) - Metro Ethernet from 10MB/sec to 100MB/sec

12.1.4 Winter 2009

- Testing, Imaging and Roll-Out of 54+ new desktops to Elementary School teachers
- Migration of data and software from each teacher machine to new machines
- Testing, Imaging and Roll-Out of 25+ new laptops to Elementary School teachers

12.2 2010

12.2.1 Spring 2010

- Implementation of Internal Video Web Site
    - Features to include: Professional Development Videos, How To / Tutorial Videos, Instructional Videos for Classroom Use, Student Podcasts Channel

  Installation of PowerSchool server at District Office
- Installation of CSI Accounting server at District Office
- Installation of additional 12-pair fiber interconnects between MS and HS

- In addition to pre-existing 3-pair fiber interconnects

Acquisition of 30 netbooks via E2T2 grant

- Acquisition of 12 laptops for Technology Committee members (STP's)

  (MS/HS) Acquisition of _ SmartBoards, _ Document Cameras, _ Projectors, _ Projector Mounts and _ Response Units via E2T2 grant

  (WGE) Acquisition of _ SmartBoards, _ Document Cameras, _ Projectors, _ Projector Mounts and _ Response Units via E2T2 grant

- Acquisition of MS Office Professional licenses
  - 1:1 teacher ratio for Microsoft Office Professional
- Revision of District Start Page w/ Teacher/Student Resources

  Links to online resources such as: CompassLearning, MapTrakker, Accelerated Reader(?), PowerSchool, Etc
  - Integrated Google Search
  - Integrated notification area from Tech Department - allows to show notices on page dynamically

12.2.2 Summer 2010

- Terminal Services at MS/HS labs
- Acquisition of Microsoft Office Professional (latest version) for District Office and School Administrators

12.2.3 Fall 2010

12.2.4 Winter 2010

12.3 2011

12.3.1 Spring 2011

12.3.2 Summer 2011

12.3.3 Fall 2011

12.3.4 Winter 2011

12.3.5 Spring 2012

12.3.6 Summer 2012

13 Acknowledgements

District Office

- Dr. Connie Dennis, Superintendent
- Sandra Bagnal, Finance Director
- Gwen Phillips - Food Services Director
- Margaret Demery - Special Needs Director

Walker Gamble Elementary School

- Sheila Floyd, Principal
- Deborah Mahan, Media Center Specialist
- Carlette Morris, Special Services
- Bertie Nesbitt, Educator
- Celeste McElveen, Educator

East Clarendon Middle - High School

- Kelvin Lemon, Principal
- Jason Cook, Assistant Principal
- Penny Kemp, Media Center Specialist
- Betty Brown, Lab Instructor
- Jewel McKenzie, Lab Instructor
- Cindi Wallace, Educator
- David Lowther, Educator
- Jody Weaver, HSAP/Cisco Lab Instructor
- Alex Villalobos, Foreign Language Department
- Danielle Culick, Special Education

District Technology Services

- Kevin Landers, Technology Director
- Timothy Timmons, Technical Support
- Sean Thomas, Technical Support

Groups

- Technology Committee
- Energy Committee

14 Appendix

14.1 No Child Left Behind Action Plan

The No Child Left Behind Act (NCLB) sets forth further requirements for state and school district technology plans. In addition to mandating that each district have a current and approved technology plan that meets all state and federal requirements, the NCLB (Title II, Part D: Enhancing Education through Technology, Section 2414, Local Applications) requires that in order for a school district to apply for competitive and formula grants under the Act, that district's technology plan must contain the following specific descriptions:

14.1.1 Improve Academic Achievement

How your district will use federal funds including Enhancing Education through Technology (E2T2) competitive and/or formula funds to improve the academic achievement, including the technology literacy, of all students attending the schools served and to improve the capacity of all teachers teaching in these schools to integrate technology effectively into curricula and instruction.

Clarendon County School District Three was awarded a grant on September 18th, 2009 for Partners And Coaches for Technology (PACT), in partnership with Spartanburg County School District 3 to create a 21st Century District learning atmosphere.

The Project Design (page 10) of the "Enhancing Education Through Technology Subgrant Application", outlines the methodologies and measurements the district will introduce to improve student academic achievement and classroom technology integration

14.1.2 Utilize Advanced Technology

Your school district's specific goals for using advanced technology to improve student academic achievement aligned with challenging state academic content and student academic achievement standards. This explanation should include a description of the curriculum and teaching strategies that integrate technology effectively into curricula and instruction, based on an intensive review of relevant research.

- Inactative Whiteboards

14.1.3 Increase Technology Access

The steps your district will take to ensure that all students and teachers in schools served by the local education agency have increased access to educational technology.

14.1.4 E2T2 Initiatives

How your district will use the E2T2 competitive and/or formula funds (including the combining of these funds with monies from other federal, state, and/or local sources) to help ensure that students in high-poverty and high-needs schools have access to technology and to ensure that teachers are prepared to integrate technology effectively into curricula and instruction.

Clarendon County School District Three was awarded a grant on September 18th, 2009 for Partners And Coaches for Technology (PACT), in partnership with Spartanburg County School District 3 to create a 21st Century District learning atmosphere.

The Project Design (page 10) of the "Enhancing Education Through Technology Subgrant Application", outlines the methodologies and measurements the district will introduce to ensure that all students have access to technology and to ensure that all teachers are prepared to integrate technology into curricula and instruction.

E2T2 initiatives include:

- Netbook Loan Initiative, please refer to 10.3.1 on page 34 for additional information.
- After Hours Computer Training, please refer to 10.3.5 on page 35 for additional information.
- Distance Learning, please refer to 8.3.10 on page 27 for additional information.

General technology plan initiatives include:

- Internet access, please refer to 8.3.10 on page 27 for additional information.
- New Library System, please refer to 7.3.17 on page 21 for additional information.
- Free Will Baptist Home for Children, please refer to 10.3.6 on page 36 for additional information.
- Student Email, please refer to 7.3.14 on page 21 for additional information.
- Student Fileshares, please refer to 7.3.15 on page 21 for additional information.
- Wi-Fi Park, please refer to 10.3.2 on page 34 for additional information.
- Website, please refer to 10.3.3 on page 34 for additional information.
- Library Consortiums, please refer to 10.3.9 on page 36 for additional information.
- Accelerated Reader Home Connect, please refer to 10.3.10 on page 37 for additional information.
- AlertNow, please refer to 10.3.11 on page 37 for additional information.

14.1.5 Professional Development

How your district will provide ongoing, sustained professional development for teachers, principals, administrators, and school library media personnel serving the local education agency to further the effective use of technology in the classroom or library media center, including, if applicable, a list of the entities that will be partners with the local education agency involved in providing the ongoing, sustained professional development.

The district will provide a combination of resources including the ePortfolio online system, a District Technology Coach, a team of peer mentors designated as School Technology Partners, and various online resources. Utilizing these resources, the district will provide methodologies for continual professional development from within the district. By also partnering with other districts and organizations, the district will work to provide educators with opportunities for further development from individuals with training and knowledge in key areas not available within the district. These resources will be made available to all faculty and staff. They will not be limited to classroom instructors.

At a minimum, the district will partner with the following organizations in ongoing, sustained professional development:

- Spartanburg County School District Three, please refer to 14.2.3 on page 62, 14.2.3 on page 62 and the September 18th, 2009 E2T2 grant[9] for additional information.
- School Technology Partners, please refer to 14.2.3 on page 62 for additional information.
- Lineage Services Group, LLC, please refer to 14.5.14 on page 80, 14.2.2 on page 61 and the September 18th, 2009 E2T2 grant[10] for additional information.
- ePortfolio, please refer to 8.3.1 on page 24 and 14.2.1 on page 61 for additional information.
- South Carolina EdTech Conference, please refer to 8.3.10 on page 27 for additional information.
- South Carolina Professional Development Online, please refer to http://ed.sc.gov/scopd/ website for additional information

[9] Clarendon County School District Three was award a grant on September 18th, 2009 for Partners And Coaches for Technology (PACT), in partnership with Spartanburg County School District 3 to create a 21st Century District learning atmosphere.

[10] Clarendon County School District Three was award a grant on September 18th, 2009 for Partners And Coaches for Technology (PACT), in partnership with Spartanburg County School District 3 to create a 21st Century District learning atmosphere.

14.1.6 E2T2 Support Services

The type and costs of technologies to be acquired for your technology program through the use of E2T2 competitive and/or formula funds, including supporting sources such as services, software, and digital curricula. Your explanation should include specific provisions for interoperability among the components of such technologies.

Clarendon County School District Three was awarded a grant on September 18th, 2009 for Partners And Coaches for Technology (PACT), in partnership with Spartanburg County School District 3 to create a 21st Century District learning atmosphere.

The Budget (page 25) of the "Enhancing Education Through Technology Subgrant Application" outlines the types and costs of each technology to be requisitioned by use of E2T2 funds. Each proposed item is detailed in this section.

14.1.7 Integrate Technology

How your district will integrate technology (including software and other electronically delivered learning materials) into curricula and instruction to support standards-based learning and provide a timeline for such integration.

14.1.8 Innovative Strategies

How your district will encourage the development and utilization of innovative strategies for the delivery of specialized or rigorous academic courses and curricula through the use of technology, including distance learning technologies, particularly for those areas that would not otherwise have access to such courses and curricula due to geographical isolation or insufficient resources.

14.1.9 Parent Involvement

How your district will ensure the effective use of technology to promote parental involvement and increase communication with parents, including a description of how parents will be informed of the technology being applied in their child's education. Explain how these strategies will allow parents to reinforce at home the instruction their child receives at school.

14.1.10 Literacy

How programs in your district will be developed, where applicable, in collaboration with adult literacy service providers, to maximize the use of technology.

14.1.11 Evaluation

The process and accountability measures that your district will use to evaluate the extent to which the activities in your technology plan, including those activities funded under the E2T2 program, are effective in integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to meet challenging state academic content and student academic achievement standards.

As outlined in in this document; for every action item we define a process and associated metrics in ensure successfull execution and accountability. This information is outlined under "Evaluation of Objectives" for each Technology Dimension.

- For "Technology Dimension 1: Learners and Their Environment", please refer to **??** on page ??
- For "Technology Dimension 2: Professional Capacity", please refer to **??** on page ??

- For "Technology Dimension 3: Instructional Capacity", please refer to **??** on page ??
- For "Technology Dimension 4: Community Connections", please refer to **??** on page ??
- For "Technology Dimension 5: Support Capacity", please refer to **??** on page ??

Clarendon County School District Three was awarded a grant on September 18th, 2009 for Partners And Coaches for Technology (PACT), in partnership with Spartanburg County School District 3 to create a 21st Century District learning atmosphere.

The Evaluation and Dissemination (page 18) of "Enhancing Education Through Technology Subgrant Application", includes a matrix of evaluations to be performed by the Project Director, District Technology Coach, Spartanburg County School District Three, School Technology Partners, Parents and Teachers.

Evaluations will include:

- Teacher ePortfolio pre/post test assessments and projects.
- MapTrakker lesson plans including technology integration for RIT band instruction.
- Results of professional development assessments.
- District Technology Coach evaluations.
- Parent surveys and evaluations.
- After school events sign in sheets.
- PASS test scores.
- MAP test scores.
- HSAP test scores.
- Evaluation rubric for SCVSP

14.1.12 Support Resources

The supporting resources (such as services, software, other electronically delivered learning materials, and print resources) that will be acquired to ensure successful and effective uses of technology.

14.2 Teacher Technology Proficiency Provisio Professional Development Plan

14.2.1 Technology Proficiency Exam and Class

Technology Proficiency is an initiative of the South Carolina Department of Education. Proviso 1.25 states that for the effective and efficient use of the funding for school technology in the classroom and internet access, the State Department of Education shall approve teacher technology competency standards. Local school districts must require teachers to demonstrate proficiency in these standards as part of each teacher's Professional Development plan.

During the 2009-2010 school year, Clarendon School District Three began using the ePortfolio system provided by the South Carolina Department of Education. ePortfolio system is used to ensure teacher technology proficiency and proficiency testing addressed. Using this online system, instructors can assess their competency levels in various areas. Based upon their assessments, these educators may then proceed through online lessons to sharpen their skills in both areas displaying weakness and those areas that they wish to have more understanding.

In order to exhibit Technology Proficiency, each instructor must meet different requirements based upon an acceptable or unacceptable assessment. These requirements may involve different degrees of online and outside studies and/or projects.

14.2.2 Technology Coaches

The objective of the district technology coach will be to develop a cadre of teachers as School Technology Partners (STP). The District Technology Coach will implement an integrated technology model using laptop computers with teachers and students in order to access web-based technology integration activities aligned with state academic standards and incorporating ISTE and NETS-S standards.

The District Technology Coach will ensure technology proficiency through a Technology Partners Conference, monthly sessions, team teaching, and mentoring in district and with Spartanburg 3. Spartanburg 3's coach will work collaboratively with our District Technology Coach in order to implement their comprehensive training model for integrating technology in the classroom. The District Technology Coach will provide teachers with rigorous professional development on integrating technology into core curriculum.

The District Technology Coach in collaboration with partner Lineage Services Group, LLC (LSG) will implement the following technology course ware during the Technology Partners Conference. Content will include:

1. developing lesson plans based on web content and how to integrate the Internet into instruction
2. develop lesson plans that assign basic to moderate tasks daily on more complex activities such as demonstration, email, computer programming, and web page creation
3. explore novel and innovative methodologies for using Promethean boards to engage and accommodate multiple learning styles
4. integrate technology using podcasts to develop reading, speaking and writing skills
5. integrating distance learning in collaborative sessions for differentiation of instruction

The district has long-term plans to continue the District Technology Coach strategy after grant funds are expended. Teacher and student technology proficiency and the integration of technology into the curriculum are critical to the long term progress in student achievement. Sustaining the best practice of a District Technology Coach to develop a cadre of School Technology Partners who will work with the Coach to mentor teachers and provide the ongoing professional development strategies are necessary. Clarendon Three will provide a District Technology Coach based on the qualifications outlined in the state's program.

The district will look to acquire funding via grants, such as E2T2, to provide employees with onsite technology coaches. The technology coach's primary focus will be to assist classroom teachers to successfully integrate the use of effective strategies and multiple technologies to differentiate and enhance student learning.

Improving student performance by interfacing with teachers to facilitate the integration of technology into teaching and learning would be the core of the technology coach's job. However, technology coaches will also focus on refining the skills of fellow

educators so they understand when to integrate technology as well as how to integrate technology most efficiently. The technology coach may achieve this by providing development sessions on infusing technology, by participating in classroom observations, and by remaining available for individual training or tutoring sessions.

Utilizing a proven development model known as "Train the Trainer," the district will further look to select individuals within the district that have displayed a certain degree of familiarity and comfort with technology, a willingness to share their knowledge and a desire to assist their fellow educators. These individuals will be designated as assistants and apprentices of the district technology coach. The technology coach will be given the task of training these individuals as fellow technology trainers. Because the district technology coach cannot be available to all educators at all times, these assistants will act as local level training support. These assistants will learn from the technology coach through observation, one-on-one training sessions, attendance to technology training events such as EdTech, as well as performing actual training sessions directed and overseen by the technology coach. They will help bridge the technology divide by serving as internal technology mentors to colleagues.

14.2.3 School Technology Partners

School Technology Partners will include not only teachers, but administrators and media specialists in their efforts. These individuals will work with the District Technology Coach to mentor fellow teachers and provide professional development opportunities. The School Technology Partners will assist the District Technology Coach in the implementation of the integrated technology model for teacher and student use of laptop computers to access web-based technology resources.

14.3 Acceptable Use Policies

14.3.1 Student Acceptable Technology Use Policy

Clarendon County School District Three provides electronic information services to students and teachers in the district who qualify as a result of participation in an orientation on how to use these resources. The District strongly believes in the educational value of such electronic resources and recognizes their potential to support our curriculum and student learning. The District's goal in providing this service is to promote educational excellence by facilitating resource sharing, innovation and communication. The District will make every effort to protect students and teachers from any misuses or abuses as a result of their experiences with an information service. All users must be continuously on guard to avoid inappropriate and illegal interaction with the information service.

Please read this contract carefully. When this document is signed it becomes a legally binding contract. The District requires your signature and that of your parent/guardian (If you are under 18) before the district can provide you with an access account.

Listed below are the provisions of this contract. If any user violates these provisions, access to technology classes or technology resources may be denied and you may be subject to disciplinary action, including possible suspension or expulsion.

1. Personal Responsibility. I will only use the electronic media for accessing educational material. I accept personal responsibility for reporting any misuse of the network to the system administrator. Misuse is defined as, but not limited to, involvement with pornography, illegal solicitation, racism, sexism, obscenity, or materials which promote illegal behavior.
2. Acceptable Use. The use of my assigned account must be in support of educational research and with the educational goals and objectives of the district as stated in the district Network Policy. I am personally responsible for this provision at all times when using the district's electronic information service.
   (a) The accessing, posting, submitting, publishing, sending or receiving of any materials in violation of applicable law is prohibited. This includes, but is not limited to: copyrighted material; threatening, obscene, disruptive or sexually explicit material; materials that promote illegal behavior; material protected as a trade secret or material that can be construed as harassment or disparagement of others based on their race/ethnicity, gender, sexual orientation, age, disability, religion, or political beliefs.
   (b) Use for commercial activities by for-profit institutions is not acceptable.
   (c) Accessing social networking websites such as myspace.com is not allowed, with the exception of those private bulletin boards or blogs that are created by teachers for specific instructional purposes or employees for specific work related communication.
3. Privileges. The use of the information is a privilege, not a right, and inappropriate use will result in a cancellation of the privilege. Each person who receives an account will participate in an orientation conducted by a staff member. The administration, staff or faculty of the district may request that the system administrator deny, revoke or suspend a specific use account.
4. Network Etiquette and Privacy. You are expected to abide by the generally accepted rules of network etiquette. These rules include, but are not limited to the following:
   (a) Be polite and use appropriate language.
   (b) Never reveal your (or anyone else's) home address, personal phone number, or other personal information to fellow students, school personnel, or individuals or companies on the Internet. Only utilize electronic mail and other forms of direct electronic communications under the direct supervision of school personnel.
   (c) Email is not guaranteed to be private. All messages may be reviewed by school officials.
   (d) Do not use the network in any way which would disrupt service by the network to others.
   (e) Do not attempt to alter or interfere with other users' ability to post, send, receive or submit material, nor attempt to delete, copy or modify another users work or identity.
5. Services. The District makes no warranties of any kind, whether expressed or implied, for the service it is providing. The District will not be responsible for any damages suffered while on the system. These damages include loss of data as a result of delays, non-deliveries, mis-deliveries or service interruptions caused by the system or your errors or omissions. Use of any information obtained via the information system is at your own risk. The District specifically disclaims any responsibility for the accuracy of information obtained through its services.

6. Security. Security on any computer system is a high priority. If you identify a security problem, notify the system administrator at once. Never demonstrate the problem to other users. Never use another individual's account. All use of the system must be under your own account. Any user identified as a security risk will be denied access to the information system.

7. Vandalism. Vandalism is defined as any malicious attempt to access, harm, alter, or destroy data of another user or any other agencies or networks that are connected to the system. This includes, but is not limited to, the uploading or creation of computer viruses or hacking. Any vandalism may result in the loss of computer services, disciplinary action, and/or legal referral.

I understand and will abide by the provisions and conditions of this contract. I understand that any violations of the above provisions may result in disciplinary action, the revoking of my user account, and appropriate legal action. I also agree to report any misuse of the information system to my school principal. All of the rules of conduct described in District Network Policy apply when I am on the network.

Student Name (please print)	*Signature*	*Date*

As the parent or guardian of this student, I have read this contract and understand that it is designed for educational purposes. Although the district has implemented a filtering system designed to restrict minors' access to harmful materials, I understand that it is impossible for Clarendon County School District Three to restrict access to all controversial materials. Therefore, I hereby waive all claims against the district, its officers, agents, or employees, for damages occurring by reason of the student's use of the information system. I also agree to report any misuse of the information system to the school principal.
I accept full responsibility for supervision if and when my child's technology use is not in a school setting and may have an impact on school activities. I hereby give my permission to issue an account to my child and certify that the information contained in this form is correct.

Parent/Guardian Name (please print)	*Signature*	*Date*

14.3.2 Student Use of Technology and Internet Safety

The School Board recognizes that technology provides ways to access the most current and extensive sources of information. Technology also enables students to practice skills and to develop reasoning and problem-solving abilities.

The Board intends that the Internet and other on-line resources provided by the district be used to support the instructional program and further student learning.

The Superintendent or designee shall establish regulations governing student access to technology that are age-appropriate.

These regulations shall include, but not be limited to, the following:

- Enforcement of the use of a technology protection measure that blocks or filters Internet access to visual depictions that are obscene, pornographic, harmful to minors, or otherwise inappropriate.
- A Student Acceptable Use Agreement shall address the following issues:
  - Prohibit access by minors to inappropriate material on the Internet and World Wide Web;
  - The safety and security of minors when using electronic mail and other forms of direct electronic communications;
  - Prohibit unauthorized access, including so-called hacking and other unlawful activities by minors online;
  - Prohibit unauthorized disclosure, use, and dissemination of personal identification information regarding minors;
  - Measures designed to restrict minors' access to materials harmful to minors.

In addition, these regulations shall establish the fact that users have no expectation of privacy and that District staff may monitor or examine all system activities to ensure proper use of the system. Students who fail to abide by District rules shall be subject to disciplinary action, revocation of user accounts and legal action as appropriate.

Enforcement of the technology protection measure shall be district-wide for all students and staff. Certificated and classified staff shall supervise students using on-line services and aid in this enforcement effort.

Because the Internet contains an unregulated collection of resources, the district cannot guarantee the accuracy of information or the appropriateness of any material that a student may encounter. Therefore, before using the district's on-line resources, each student and his/her parent/guardian shall sign and return a Student Acceptable Use Agreement. This agreement shall specify user obligations and responsibilities and shall indemnify the district for any damages. The parent/guardian shall agree not to hold the district responsible for material acquired by the student on the system, for violations of copyright restrictions, users' mistakes or negligence or any costs incurred by users.

Legal References:

US Code, Title 20 6801-7005 Technology for Education Act of 1994

Children's Internet Protection Act

The Family Educational Rights and Privacy Act (FERPA)
Protecting Children in the 21st Century Act
Health Insurance Portability and Accountability Act (HIPAA)
Individuals with Disabilities Education Act (IDEA)
South Carolina Code of Laws, Freedom of Information Act

Web Sites:

South Carolina School Board Association
http://www.scsba.org

Schools and Libraries Division (E-Rate)
http://www.sl.universalservice.org

14.4 How E-Rate Areas Have been Addressed

14.4.1 CIPA

The Children's Internet Protection Act (CIPA) is a federal law enacted by Congress to address concerns about access to offensive content over the Internet on school and library computers. CIPA imposes certain types of requirements on any school or library that receives funding for Internet access or internal connections from the E-rate program – a program that makes certain communications technology more affordable for eligible schools and libraries. Schools and libraries are required to certify that they have their safety policies and technology in place before receiving E-rate funding.

OpenDNS is the world's leading provider of Internet navigation and security services that make K-12 school networks safer, faster, smarter and more reliable. The service is relied on by more than 25,000 schools and school districts, and some of the largest libraries, to keep students and staff protected online from inappropriate or malicious content. OpenDNS is the easiest way to achieve CIPA (Children's Internet Protection Act) compliance necessary for E-Rate funding[11].

As shown below, East Clarendon School District Three utilizes OpenDNS as the primary method to ensure CIPA compliance.

[11] This information was taken from the associated vendor's website.

March 24, 2010
OpenDNS
199 Fremont St
San Francisco, CA 94105

OpenDNS

Headquarters
199 Fremont St, 12th Fl
San Francisco, CA 94105

Contact
(415) 344-3166 p
(415) 344-3252 f

To whom it may concern:

This is to confirm that in accordance with CIPA Compliance, Clarendon County School District Three began using OpenDNS to filter unsafe and otherwise inappropriate Internet content on January 1, 2009. OpenDNS is an industry-leading Web content filtering, anti-phishing, DNS infrastructure and navigation services solution.

Sincerely,

Allison Rhodes
Director of Marketing
OpenDNS.com

14.4.2 OpenDNS[12]

OpenDNS is the world's leading provider of Internet navigation and security services that make K-12 school networks safer, faster, smarter and more reliable. The service is relied on by more than 25,000 schools and school districts, and some of the largest libraries, to keep students and staff protected online from inappropriate or malicious content. OpenDNS is the easiest way to achieve CIPA (Children's Internet Protection Act) compliance necessary for E-Rate funding.

Web Content Filtering
Cloud-based, award-winning Web content filtering from OpenDNS with more than 50 categories of content. No appliance necessary. Effective against proxies, P2P, Web 2.0, adult and more.

Web Content Filtering
Cloud-based, award-winning Web content filtering from OpenDNS with more than 50 categories of content. No appliance necessary. Effective against proxies, P2P, Web 2.0, adult and more.

PhishTank Anti-Phishing
Industry-leading anti-phishing powered by PhishTank, the most authoritative source of phishing data on the Internet. Protects your network, organization and its employees from fraudulent phishing scams.

Malware Site Protection / Botnet Protection
DNS layer security protects the most vulnerable level of your network against the latest threats, including viruses, worms and zero-day vulnerabilities.

Whitelist / Blacklist
Lets you decide where your users can navigate on your customized Internet. Whitelist-only functionality available.

SmartCache
OpenDNS's proprietary DNS caching technology finds and locates the last known good IP address for Web sites that are experiencing difficulty, making Web sites that are down for the rest of the Internet load for OpenDNS users. OpenDNS Guide Provides responsible and helpful search results for people on your network when they make typos in the address bar, freeing them of the annoying error page experience.

Shortcuts
Browser shortcuts let your users map a short term to a long URL via the address bar.

Typo Correction
Automatic typo correction auto-corrects the most common typos in top-level domains like .com, .edu and .net. Support 24/7 Phone and Email with SLAs Round-the-clock support with Service Level Agreements available. Forums and Knowledge Base always available. DNS Infrastructure Globally Distributed Network OpenDNS operates datacenters at the most strategically connected intersections of the Internet around the world. Anycast Routing Technology Routes your DNS queries automatically to our closest datacenter, making your Internet faster and more reliable than ever before.

Insight and Reporting
Detailed Charts and Stats DNS and Web traffic data about your network delivered in detailed charts and statistics in your OpenDNS account.

[12] This information was taken from the associated vendor's website.

Daily Reports
Delivered to your inbox, email reports keep you updated about your network's top domains, blocked domains and more. Archived Stats and Logs Lets you compare data over time and spot trends, and refer back to historical traffic data.

NXDOMAIN
Customization Allows you to customize the landing page URL users on your network are taken to in the case of an NXDOMAIN.

Block Pages
Customization Allows you to customize the landing page URL users on your network are taken to in the case of a blocked domain.

Custom Logo / Custom Message
If using the OpenDNS Guide, customize the page with your logo and message. Same with blocked pages.

Account Management
Web-based Dashboard Allows you to remotely access and manage of all your networks over the Web.

Delegated Account Administration
Grant multiple people within your organization account administration responsibilities.

14.4.3 Traffic Lockdown

14.4.4 Secured Workstations

14.4.5 IDS

4

14.4.6 Remote Monitoring/Support

14.5 Software

The district owns and maintains licenses for many software titles. These applications fill various needs to departments and schools within the district. Without a clear knowledge of what software is available, the district cannot effectively utilize software resources to their fullest potential. This appendix serves as guide to district acquired software. Each software title is listed along with information pertaining to developer, provider, licensing, funding, etc.

Once a more through and accurate understanding of the software used is obtained, the district can:

- Evaluate the effectiveness of software titles
- Evaluate the need for additional software titles
- Evaluate the need to increase access to current software
- Evaluate the need to eliminate non-effective software
- Evaluate the existence of redundant software titles

Note: Software is listed below alphabetically.

14.5.1 Accelerated Reader

Software:	Accelerated Reader
Vendor:	Renaissance Learning
Provider:	Renaissance Learning
Website:	http://www.renlearn.com/ar/
Version:	Enterprise
Deployment:	Web Based / External Host
Licensing:	Per Student / Per Year
Initial Cost:	
Recurring Cost:	$3228 Walker Gamble Elementary School[13] $3900 East Clarendon Middle-High School[14]
Support Cost:	
Funding Source:	K-5 Enhancement (Lottery Funds) - Walker Gamble Elementary School[15] Formative Assessment (State Funding) - East Clarendon Middle-High School[16]
Location:	Middle-High School - Library, Walker Gamble Elementary - Library

Abstract:
Accelerated Reader (AR) is a daily progress monitoring software assessment in wide use by primary and secondary schools for monitoring the practice of reading.

Future Considerations:
Should we host internally? How would this affect costs? Pros vs Cons?

Description:[17]
Accelerated Reader is an assessment that primarily determines whether or not a child has read a book. The software provides additional information to teachers regarding reading rates, amount of reading, and other variables related to reading. Renaissance Learning does not require or advocate the use of incentives with the assessment, although it is a common misperception.

Additionally, a number of other assessments are available to assess higher order thinking skills and vocabulary. Quizzes can be taken on fiction and non-fiction books, textbooks, supplemental material, and educational magazines. As of 2006, there are more than 100,000 books in the Accelerated Reader database.

[17] This description was taken from the associated vendor's website.

There are three steps to using Accelerated Reader. First, students choose and read a fiction or non-fiction book, textbook, or magazine. Teachers monitor reading including guided, paired, literature-based, and textbook reading. Second, students take a quiz. Teachers can create their own quizzes for those not available in Accelerated Reader. Third, the teacher receives information that is intended to assist, motivate reading, monitor progress, and target instruction. Reports regarding reading level and comprehension skills are available through the software.

Currently, there are two versions: a desktop version and a web-based version in Renaissance Place, the company's web software for Accelerated Reader and a number of other software products (e.g. Accelerated Math). (Wikipedia)

14.5.2 Accounting +Plus

Software:	Accounting +Plus
Vendor:	CSI Technology Outfitters
Provider:	Internal
Website:	http://www.csioutfitters.com/
Version:	
Deployment:	Terminal Services
Licensing:	Per User
Initial Cost:	
Recurring Cost:	
Support Cost:	
Funding Source:	
Location:	Clarendon County School District Three - District Office

Abstract:
Accounting +Plus provides a financial management solution to the district for all day to day operations.

Future Considerations:
None

Description:[18]
As a government organization, the district requires software designed to help meet the challenges specific to the public sector. Accounting +Plus enforces business rules, increases reliability and boosts productivity. As such, CSI Accounting +Plus follows recognized accounting standards.

14.5.3 AlertNow

Software:	AlertNow
Vendor:	Blackboard
Service Provider:	Blackboard
Website / URL:	http://www.alertnow.com/
Version:	N/A
Deployment Type:	Web Based / Externally Hosted
Licensing:	Per Student / Per Year
Initial Licensing Cost:	$3.50 per student
Recurring Licensing Cost:	
Initial Support Cost:	
Funding Source:	

Location:	East Clarendon Middle-High School

[18] This description was taken from the associated vendor's website.

Abstract:
AlertNow is a communication service, designed to provide voice notifications to members of the K-12 community such as parents and students.

Future Considerations:
The district may evaluate the potential of leveraging existing onsite telecommunications to address the need of a"robo caller" solution. Utilizing existing resources, the district may be empowered to provide the same service without the recurring costs.

Description:[19]
AlertNow is a robo caller that provides school principals or communications officers with the means to record and send a message with one phone call or by using a secure, password-protected Internet site. The process only takes three simple steps. Users easily decide who to send a message to, what content should be included and when the message should be distributed. Messages can be sent immediately or scheduled for distribution at a specific time to any electronic device.

14.5.4 ApexLearning

Software:	ApexLearning
Vendor:	ApexLearning
Provider:	ApexLearning
Website:	http://www.apexlearning.com
Version:	N/A
Deployment:	Web Based / External Host
Licensing:	Yearly Subscription
Initial Cost:	
Recurring Cost:	$20,000
Support Cost:	
Funding Source:	2009-2010 - PDSI 2010-2011 - General Fund 2011-2012 - General Fund
Location:	East Clarendon Middle-High School - Computer Lab

Abstract:
ApexLearning offers an online web-based system that allows high school students to recover credits required for high school graduation.

Future Considerations:
We currently own CompassLearning Odyssey. We have licensed content for 6th thru 8th grades. CompassLearning offers a credit recovery solution. We should evaluate their offering to assess cost savings, usability, effectiveness and desirability.

Description:[20]
For many students, the need to recover only one or two course credits is all that stands between them and graduation from high school. These students may have already satisfied seat time requirements for a course in which they were unsuccessful — and may have learned a significant amount of what was expected of them. These students are seeking an opportunity to accelerate through the required course material to earn those final credits.

Other students are ill prepared for high school coursework and have failed several classes. For these students, the challenge of making up the required credits is daunting. If the only option is to repeat the same course, in the same traditional format as the first time, the chance of success is low. Not wanting to fail again, these students are at increased risk of dropping out — or may have already dropped out. With support, these students can be successful.

[19] This description was taken from the associated vendor's website.
[20] This description was taken from the associated vendor's website.

Apex Learning digital curriculum makes it possible to offer a credit recovery program that can address the diverse needs of all these credit-recovery students.

With Apex Learning online courses, students can progress at their own pace, taking as much — or as little — time as necessary to master the material. Particularly significant for credit-recovery students, unit-level diagnostics allow students to move quickly over material they have previously mastered. Direct instruction incorporates multimedia — in the form of images, audio, video, animations, and interactive elements — along with instructional text to provide students with multiple representations of concepts as well as address their different learning styles. This could be just what is required for a previously unsuccessful student to succeed in rigorous high school courses.

14.5.5 CompassLearning Odyssey

Software:	CompassLearning Odyssey
Vendor:	CompassLearning
Provider:	Internal
Website:	http://www.compasslearning.com/
Version:	N/A
Deployment:	Web Based / Internally Hosted
Licensing:	Perpetual
Initial Cost:	$36,258
Recurring Cost:	
Support Cost:	
Funding Source:	2009-2010 - Stimulus Funds 2010-2011 - Technical Assistance Funds 2011-2012 - Technical Assistance Funds
Location:	East Clarendon Middle-High School - 6th thru 8th Grades

Abstract:
CompassLearning Odyssey is a web-based assessment and instructional software. The software is used to assess a student and then prescribe instructional activities and lessons to butress classroom instruction. By assessing and instructing students using interactive software, CompassLearning's goal is to lift students to higher levels of knowledge and understanding.

Future Considerations:
The district may wish to address the use of CompassLearning Odyssey in elementary grades and grades 9th through 12th. CompassLearning offers high school students credit recovery opportunities similar to ApexLearning. The district may evaluate the credit recovery solution as a possible replacement for ApexLearning.

Description:[21]
Compass Learning Odyssey assesses each student's understanding of key objectives. Odyssey helps educators identify students who are struggling with academic concepts and delivers personalized, scaffolded instructional support for each student. The electronic diagnostic assessment in Odyssey targets the skills that each student lacks and then creates an individualized learning path for that student. The time-consuming task of monitoring and measuring student success is made easier with Odyssey's wide variety of reporting features.
CompassLearning Odyssey solutions for secondary students can help teachers address each and every student's need for engaging instructional content and personal attention. Odyssey applies innovative teaching methods within a rich, interactive learning environment, using flash-based activities — complete with sound and animation — to teach and review concepts. All Odyssey courses are based on current and confirmed research about the way secondary students think and learn.

[21] This description was taken from the associated vendor's website.

14.5.6 Complete Campus Security System

Software:	Complete Campus Security System
Vendor:	Ident-A-Kid Services of America
Provider:	Internal
Website:	betoosafe.com
Version:	N/A
Deployment:	Windows Desktop Application
Licensing:	Yearly Renewal
Initial Cost:	$0.00
Recurring Cost:	$0.00
Support Cost:	
Funding Source:	Free
Location:	East Clarendon Middle-High School, Walker Gamble Elementary School

Abstract:
The Complete Campus Security System is a software that provides check-in and check-out of individuals as they enter and exit school/district property. The software is used to log all visitors, provide visitors with a required ID badge, track late arrival students, track students leaving early, and faculty/staff arrivals and departures.

Future Considerations:
1. The district has the option of capturing not just a picture but also the driver license as well for every visitor that comes on campus. This functionality requires the purchase of a scanner for this purpose.

2. In addition to managing visitor traffic, Complete Campus Security System can enable the district to check to see if visitors are listed as convicted sexual offenders in the U.S. Department of Justice's national database. The district may investigate this use if not already implemented at each site.

Description:[22]
The Complete Campus Security System visitor management software is used to track the entry and exit of individuals within the school system.

Its primary role is to issue a variety of ID badges, including an individual's photo, for visitors. Each campus can print "on demand" Visitor, Volunteer, Substitute, and Student passes. Also, an archived photo can be automatically taken of each visitor at Check In for positive ID.

Its secondary role is to record the late arrival and early departure of students. It is also capable of printing temporary ID's for students who have lost or damaged their permanent Student ID. All students are required to wear their ID throughout the day while on school property.

Thirdly, using RFID badges, faculty and staff can quickly sign in and out of each location. The RFID badges simply have to be tapped to a receiver at the check-in computer. Built in reports enable administrators to track this information for internal use.

[22] This description was taken from the associated vendor's website.

14.5.7 eChalk Web Site

Software:	eChalk
Vendor:	eChalk
Provider:	eChalk
Website:	http://www.echalk.com
Version:	N/A
Deployment:	Web Based / Externally Hosted
Licensing:	Yearly Subscription
Initial Cost:	$3,480 [23]
Recurring Cost:	
Support Cost:	
Funding Source:	Title 2 Funds
Location:	East Clarendon Middle-High School, Walker Gamble Elementary School, Clarendon County School District Thr

Abstract:
eChalk provides a web hosting and content management system for a website for the district, each school and a page for teachers.

Future Considerations:
None.

Description:[24]

14.5.8 Excent

Software:	Excent
Vendor:	Excent
Provider:	Excent
Website:	http://www.getk12.com/
Version:	N/A
Deployment:	Web Based / External Hosted
Licensing:	Provided by the South Carolina Department of Education
Initial Cost:	
Recurring Cost:	
Support Cost:	
Funding Source:	Provided by the South Carolina Department of Education
Location:	East Clarendon Middle-High School - Special Services, Walker Gamble Elementary School - Special Services, Cl

Abstract:
Case management system for meeting special education's IEP requirements

Future Considerations:
None.

Description:[25]
Individualized Education Plans (IEP) originated from the Individuals with Disabilities Education Act and is designed for students with various disabilities who meet the federal and state special education requirements. While special education case management is fundamentally the same from state to state and district to district, each district has unique interpretations and requirements. The Excent IEP solution is built around a combination of core database elements dictated by state and federal requirements and the forms, reports, and processes specific to the district.

[24] This description was taken from the associated vendor's website.
[25] This description was taken from the associated vendor's website.

14.5.9 Fitnessgram

Software:	Fitnessgram
Vendor:	Human Kinetics
Provider:	Internal
Website:	http://www.fitnessgram.net/
Version:	8.X
Deployment:	Windows Client/Server
Licensing:	Perpetual
Initial Cost:	
Recurring Cost:	$0.00
Support Cost:	
Funding Source:	
Location:	Walker Gamble Elementary School - Physical Education, East Clarendon Middle-High School - Physical Educat

Abstract:
Fitnessgram provides district physical education instructors with a solution to maintain recreational/health related plans and information for each student.

Future Considerations:
Version 9.0 of Fitnessgram is the first web based release of the software. The upgrade costs are yet to be published by the developer. Currently, new customer pricing is set at $750.00 per school. This software does not require any further recurring costs outside of the initial product cost. By upgrading both schools to version 9.0, the district can centralize the installations to a central server. By doing so, users can access the software from any networked client machine within the district.

Description:[26]
Fitnessgram is a fitness assessment and reporting program for youth. The assessment includes a variety of health-related physical fitness tests that assess aerobic capacity; muscular strength, muscular endurance, and flexibility; and body composition. Scores from these assessments are compared to Healthy Fitness Zone® standards to determine students' overall physical fitness and suggest areas for improvement when appropriate.

The Healthy Fitness Zone standards are criterion-referenced standards that are based on levels of fitness needed for good health. The standards are set specifically for boys and girls of various ages using the best available research. The Healthy Fitness Zone standards were established by the Fitnessgram Scientific Advisory Board.

The software provides an efficient way for schools and other organizations to perform effective fitness and physical activity assessments on children, provide appropriate feedback to children and parents, and maintain accurate and comprehensive records over time.

14.5.10 HealthOffice

Software:	HealthOffice
Vendor:	HealthMaster
Provider:	Internal
Website:	http://www.healthmaster.com/
Version:	5.X
Deployment:	Windows Client/Server
Licensing:	
Initial Cost:	
Recurring Cost:	$350.64 - 2009-2010
Support Cost:	
Funding Source:	General Fund
Location:	East Clarendon Middle-High School - Nurse, Walker Gamble Elementary School - Nurse

[26] This description was taken from the associated vendor's website.

Abstract:
HealthOffice is utilized by the district's nurses. Using HealthOffice, the nursing staff are able to record student visits, student vitals and submit reports for funding/reimbursements.

Future Considerations:
None.

Description:[27]
HealthOffice documents every aspect of each student office visit: date, time, examiner, referral, location, examination data, treatment, results, actions and dispositions, and more. On five easily navigated tabs, Event, Assessments, Symptoms, Treatments, N.A.N.D.A. (North American Nursing Diagnosis Association) and the R.A.D. (Results, Actions and Dispositions) area can be quickly and accurately recorded. Critical data about the student, including demographic data, alerts as well as indications about medications, special problems or special needs are always visible. Emergency Information cards are always available on the HealthOffice toolbar.

The complete student record consolidates everything the nurse needs to know about an individual student in one location. The multiple screen tabs document the students demographic and historical data. They track medications, special needs and special problems currently administered to the student as well as historically. The event screen will track past office visits, medication administrations, and health screenings. The immunization tab will show the student's current, past and outstanding immunizations.

HealthOffice can help identify and document health office services eligible for reimbursement by Medicaid and other federal and state health care programs, and help produce audit safe service documentation to prepare claim reports. This greatly enables the district to recover health office costs.

14.5.11 iSAFE Internet Safety Curriculum (under consideration)

Software:	i-SAFE Internet Safety Curriculum
Vendor:	i-SAFE
Provider:	i-SAFE / Internal
Website:	isafe.org
Version:	Gold Subscription
Deployment:	Web-Based Externally / Internal Web-Based Video Distribution
Licensing:	Annual Subscription
Initial Cost:	$520 per school (minus 10% discount - $52)
Recurring Cost:	$520 per school
Support Cost:	
Funding Source:	General Funds
Location:	Walker Gamble Elementary School, East Clarendon Middle-High School

Abstract:
i-SAFE's e-Safety curriculum provides material to teach administrators, educators, students, parents and community members about the importance of Internet safety and the best practices for implementing that knowledge. The i-SAFE curriculum consists of lesson plans, videos and other multimedia for effectively integrating these lessons into the classroom.

Future Considerations: Under Consideration: Not currently implemented.

[27] This description was taken from the associated vendor's website.

1. On November 5, 2009, the FCC released a "Notice of Proposed Rulemaking" that seeks public comment. The FCC's proposed rule includes the exact language enacted by Congress and signed by the President amending CIPA. The law and the FCC's proposed rule will place new Internet safety education requirements on any elementary or secondary school having computers with Internet access that apply for services at discount rates from the E-rate program. While acknowledging the FCC's "Notice of Proposed Rulemaking" is not a final rule, the "Notice" gives the district a specific "heads-up" on what is possibly coming and affords them lead time to get in a prepared position to stay ahead of the new CIPA law and forthcoming FCC rule rather than run behind them.
2. Regardless of federal regulations, the district has acknowledged the need to embed Internet safety knowledge within the student, parent and community. By providing a curriculum such as i-SAFE's, this can be accomplished.
3. This type of instruction fits well with the overall goals of the district's Acceptable Use, Email Use and Technology Use Policies.
4. The community aspect of this curriculum fits well with the overall goals of the district's community outreach objectives.

Description:[28]
Available in all 50 states, Washington, D.C., and Department of Defense schools located across the world, i-SAFE is a non-profit foundation whose mission is to educate and empower youth to make their Internet experiences safe and responsible. The goal is to educate students on how to avoid dangerous, inappropriate, or unlawful online behavior. i-SAFE accomplishes this through dynamic K-12 curriculum and community outreach programs to parents, law enforcement, and community leaders.

By utilizing an i-SAFE subscription, all teachers have unlimited online access to all e-Safety curriculum developed by i-SAFE. This provides the district's educators with more than 250 K-12 lesson plans and activities. The subscription includes online access to i-SAFE's E-Rate curriculum, and upon request an annual implementation metrics report including an E-Rate Audit Report. The subscription includes access to all i-SAFE interactive Webcasts and other i-SAFE videos. The subscription also provides instructors with tools to acquire Professional Development credits and to earn a certificate from i-SAFE in Internet safety.

14.5.12 KeyTrain

Software:	KeyTrain
Vendor:	SAI Interactive, Inc.
Provider:	Internal
Website:	http://www.keytrain.com/
Version:	N/A
Deployment:	Windows Client/Server
Licensing:	
Initial Cost:	
Recurring Cost:	
Support Cost:	
Funding Source:	
Location:	East Clarendon Middle-High School

Abstract:
KeyTrain is an interactive training system for basic workplace skills. KeyTrain teaches skills required by all jobs using the Work Keys assessment system.

Software:	Orchard
Vendor:	Orchard Learning
Provider:	Internal
Website:	http://www.orchardsoftware.com/
Version:	
Deployment:	Windows Client/Server
Licensing:	Perpetual License
Initial Cost:	
Recurring Cost:	N/A
Support Cost:	
Funding Source:	
Location:	East Clarendon Middle-High School, Walker Gamble Elementary School

[28] This description was taken from the associated vendor's website.

Future Considerations:
None.

Description:[29]
KeyTrain is a targeted curriculum and learning tool designed specifically to help people master the applied workplace skills as defined by the WorkKeys® system and the National Career Readiness Certificate (NCRC). The WorkKeys® system measures the skills required in the everyday workplace. It helps to improve America's workforce by sharpening the workplace skills of students or employees. Employees are then placed in jobs where they can be more successful. This system benefits individuals, businesses and educators by providing a common language for describing basic skills needed for jobs.

14.5.13 MAP (TestTaker)

Software:	MAP TestTaker
Vendor:	Northwest Evaluation Association
Provider:	Internal
Website:	http://www.nwea.org/
Version:	7.0
Deployment:	Windows Client/Server
Licensing:	Yearly Service
Initial Cost:	
Recurring Cost:	$11,705 - 2009-2010
Support Cost:	
Funding Source:	K5 Enchancement Funding - Walker Gamble Elementary School ($6590, 2009-2010) Technical Assistance Funds - East Clarendon Middle-High School ($5115, 2009-2010)
Location:	East Clarendon Middle-High School, Walker Gamble Elementary School

Abstract:
MAP tests assess students individually by utilizing the TestTaker software. MAP testing is adaptive and adjusts question difficulty based on responses of the student.

Future Considerations:
None.

Description:[30]
The district utilizes several software resources to buttress student learning and teacher effectiveness. These utilities assess students knowledge levels, provide feedback to the instructors, and assist the instructors in developing custom learning plans for the students. Each semester the school tests all students using the MAP assessment software provided by the NWEA. The information gathered from the MAP testing is integrated with other software such as MAP Tracker. MAP Tracker is an online resource that provides the tools necessary for all teachers to develop their lesson plans and to submit them to the administration.

[29] This description was taken from the associated vendor's website.
[30] This description was taken from the associated vendor's website.

14.5.14 MapTrakker (TesTrakker)

Software:	MapTrakker (TesTrakker)
Vendor:	Lineage Services Group
Provider:	Lineage Services Group
Website:	http://www.lsgedu.com/maptrakker.htm
Version:	2.0
Deployment:	Web Based / Externally Hosted
Licensing:	Yearly Subscription
Initial Cost:	$5,409.78 (2009-2010)
Recurring Cost:	$2,995
Support Cost:	
Funding Source:	Technical Assistance Funds
Location:	East Clarendon Middle-High School

Abstract:
MapTrakker allows teachers and administrators to create appropriate and relevant lesson plans.

Future Considerations:
None.

Description:[31]
MAPTrakker is an online resource that provides the tools necessary for all teachers to develop their lesson plans and to submit them to the administration. These lesson plans can be developed around the RTI (Response To Intervention). As plans are specific to each child's needs, the system assists educators in differentiating instruction.

14.5.15 Office Professional 2003/2007

Software:	Office Professional 2003/2007
Vendor:	Microsoft
Provider:	Internal
Website:	http://www.microsoft.com
Version:	2003/2007
Deployment:	Windows Client
Licensing:	Per Device - Perpetual License
Initial Cost:	$6,500 (100 licenses @ $65.00 each)
Recurring Cost:	N/A
Support Cost:	N/A
Funding Source:	2009-2010 - One Cent Sales Tax Funds
Location:	East Clarendon Middle-High School, Walker Gamble Elementary School, Clarendon County School District Thr

Abstract:
Microsoft Office is a productivity suite consisting of tools for word processing, spreadsheets, databases and presentations.

Future Considerations:
In an effort to cut down on the number of licenses needed to support faculty, staff and students, the district may evaluate the use of terminal services for remote publication of the Office suite to users' desktops.

[31] This description was taken from the associated vendor's website.

Description:[32]
Microsoft Office is an office suite of interrelated desktop applications and services for the Microsoft Windows and Mac OS X operating systems. Microsoft Office was introduced by Microsoft in 1989 for Macintosh, with a version for Windows in 1990. Office Professional containes Microsoft Word (word processing), Microsoft Excel (spreadsheets), Microsoft PowerPoint (presentations), Microsoft Access (databases) and Microsoft Publisher (desktop publishing). Microsoft has made available, free of charge, an add-on known as the Microsoft Office Compatibility Pack to allow Office 2000-2003 for Windows and Office 2004 for Mac editions to open, edit, and save documents created under the new formats for Office 2007. (Wikipedia)

14.5.16 Orchard

Software:	Orchard
Vendor:	Orchard Learning
Provider:	Internal
Website:	http://www.orchardsoftware.com/
Version:	
Deployment:	Windows Client/Server
Licensing:	Perpetual License
Initial Cost:	
Recurring Cost:	N/A
Support Cost:	
Funding Source:	
Location:	East Clarendon Middle-High School, Walker Gamble Elementary School

Abstract:
Orchard is an instructional software the focuses on individualized learning.

Future Considerations:
Currently, we possess application licenses for both the elementary and middle-high schools. We currently use the software only at the elementary school, in limited capacity. We may wish to consider more thorough use within the elementary school and possible use at the middle-high school. We may also wish to compare this software with others that are currently employed within the district (CompassLearning, PLATO, etc.) to reduce unnecessary redundancy.

Description:[33]
Orchard provides targeted instruction in math, reading, writing, language arts, and science for grades K-9. Orchard combines formative and benchmark assessments aligned with state standards, motivating instruction, and qualitative data reporting. The software enables educators to adapt and deliver both individualized and whole class instruction that meets the needs of all students, including ELL learners and those with special needs.

14.5.17 PLATO

Software:	PLATO
Vendor:	PLATO Learning
Provider:	Internal
Website:	http://www.plato.com/
Version:	
Deployment:	Windows Client/Server
Licensing:	Perpetual
Initial Cost:	
Recurring Cost:	
Support Cost:	
Funding Source:	
Location:	East Clarendon Middle-High School

[32] This description was taken from the associated vendor's website.
[33] This description was taken from the associated vendor's website.

Abstract:
PLATOis an instructional software the focuses on individualized learning.

Future Considerations:
We may wish to consider more thorough use within the district. We may also wish to compare this software with others that are currently employed within the district (CompassLearning, Orchard, etc.) to reduce unnecessary redundancy. **Update: Use of PLATO has been discontinued.**

Description:[34]
PLATO Learning instructional technology offers a comprehensive library of rigorous, interactive content and assessment.PLATO is used to keep students on track to pass state-mandated assessments and graduate.

14.5.18 PowerSchool

Software:	PowerSchool
Vendor:	Pearson School Systems
Provider:	Internal
Website:	http://powerschool.com/
Version:	6.1
Deployment:	Web Based / Internally Hosted
Licensing:	Provided by South Carolina Department of Education
Initial Cost:	N/A
Recurring Cost:	N/A
Support Cost:	N/A
Funding Source:	South Carolina Department of Education
Location:	East Clarendon Middle-High School, Walker Gamble Elementary School, Clarendon County School District Thr

Abstract:
PowerSchool is a web-baed student information system.

Future Considerations:
None.

Description:[35]
PowerSchool is a student information system that is currently being deployed throughout the state of South Carolina. It will house all records pertaining to students within the district. PowerSchool is a replacement for the SASIxp student information system.

14.5.19 SIFWorks Zone Integration Server

Software:	SIFWorks Zone Integration Server
Vendor:	Edustructures / ESP Solutions Group, Inc.
Provider:	Internal
Website:	http://edustructures.com/ |http://www.espsolutionsgroup.com/
Version:	2.0r1 Enterprise Edition
Deployment:	Web Based / Internally Hosted
Licensing:	Provided by South Carolina Department of Education
Initial Cost:	N/A
Recurring Cost:	N/A
Support Cost:	N/A
Funding Source:	South Carolina Department of Education
Location:	Clarendon County School District Three - District Office

[34] This description was taken from the associated vendor's website.
[35] This description was taken from the associated vendor's website.

Abstract:
The SIFWorks Zone Integration Server allows multiple programs to process data via the SIF information exchange protocol. By utilizing the ZIS, the district is able to send and receive information from various agencies and between applications such as the student information system, user directories, etc.

Future Considerations:
None.

Description:[36]
Although there are many variations of SIF topographies, the common feature is that a number of applications wish to share data. All SIF implementations, regardless of their complexity, consist of one or more applications with their associated agents communicating via a Zone Integration Server (ZIS).

One typical use of SIF is to connect products from various vendors together within a single school. These applications could include a student information application, a food service program, and a library automation application. Each of these applications has a vendor-provided interface program called an Agent.

Since the same school shares these applications, it makes sense to group them together into a logical entity. This entity is referred to as a Zone and is managed by a Zone Integration Server (ZIS).

There are no predefined sizes for zones, so a zone can be as large or small as required in order to meet the needs of the customer. An application relies on its agent to exchange data using a predefined data model. Agents then communicate with other agents using the ZIS as a routing resource. The ZIS also provides access control so the customer can control which applications have access to which SIF data.

14.5.20 Spectrum

Software:	Spectrum
Vendor:	Follet Software
Provider:	Internal
Website:	http://www.follettsoftware.com/
Version:	5.3
Deployment:	Windows Client/Server
Licensing:	Perpetual
Initial Cost:	
Recurring Cost:	$900 (2009-2010)
Support Cost:	
Funding Source:	Walker Gamble Elementary School - General Fund ($450, 2009-2010) East Clarendon Middle-High School - General Fund ($450, 2009-2010)
Location:	East Clarendon Middle-High School - Library, Walker Gamble Elementary School - Library

Abstract:
Spectrum is a library management software which provides a Circulation application for administrators and a Patron Catalog application for students.

Future Considerations:
Migration from Spectrum to a current system, preferably providing web access via a standards compliant software platform.

[36] This description was taken from the associated vendor's website.

Description:[37]
Spectrum provides the district with an application to manage all library resources and student/patron records. As a library management system, it allows librarians access to information needed to operate the library day-to-day. The Circulation application allows administrators to search patron records, check resources in and out, import new resources, etc. The Patron Catalog application provides students/patrons with a search function for locating resources within the library.

14.5.21 Super Star

Software:	Super Star
Vendor:	HelpMe2Learn
Provider:	Internal
Website:	http://www.helpme2learn.com/
Version:	
Deployment:	Windows Client/Server
Licensing:	
Initial Cost:	
Recurring Cost:	
Support Cost:	
Funding Source:	
Location:	Walker Gamble Elementary School - Computer Lab

Abstract:
Help Me 2 Learn's Super Star is an educational software focused on Language Arts and Math.

Future Considerations:
None.

Description:[38]
Super Star is educational software used to reinforce instruction in Language Arts and Math. Super Star is focused on elementary school age children. By utilizing the network version of Super Star, children can access the software throughout the school. Super Star provides distinct learning opportunities in English as a Second Language (ESL) areas.

14.5.22 WinSNAP

Software:	WinSNAP
Vendor:	School-Link Technologies
Provider:	Internal
Website:	http://www.sl-tech.net/
Version:	2.7.2
Deployment:	Windows Client/Server
Licensing:	Perpetual
Initial Cost:	$1,316.25 (2009-2010)
Recurring Cost:	
Support Cost:	
Funding Source:	East Clarendon Middle-High School - Food Services Funds ($658.13, 2009-2010) Walker Gamble Elementary School - Food Services Funds ($658.13, 2009-2010)
Location:	East Clarendon Middle-High School, Walker Gamble Elementary School, Clarendon County School District Thr

Abstract:
WinSNAP is a food services management and accountability program. The software provides the ability to run Point-Of-Sale at each school during meals. It also provides the ability to track information pertaining to Free and Reduced Lunch.

[37] This description was taken from the associated vendor's website.
[38] This description was taken from the associated vendor's website.

Future Considerations:
The district may consider migrating from WinSNAP to WebSMARTT. WebSMARTT is web-based. WinSNAP will continue to be supported by the manufacturer. However, it will only offer POS and Free and Reduced Lunch services. Ordering, inventory, menu planning and meal production functions are available within the WebSMARTT software.

Description:[39]
WinSNAP is used to manage all information regarding students, meals and resources. WinSNAP offers tools for Point of Sale and Free and Reduced application processing. The software communicaties at the school and district levels. It allows the food services administrators to run reports and submit them to state agencies.

[39] This description was taken from the associated vendor's website.

15 Bibliography

General

Schools: An Overview of Energy Use and Energy Efficiency Opportunities
http://www.energystar.gov/ia/business/challenge/learn_more/Schools.pdf

International Society for Technology in Education (ISTE) Technology Support Index
http://tsi.iste.org/techsupport/tech-support-index-2.4.pdf

Donations

Computers for Learning - U.S. General Services Administration
Executive Order 12999
http://computersforlearning.gov/

Demographic and Sociographic Resources

Google Public Data
http://www.google.com/publicdata?ds=usunemployment&met=unemployment_rate&idim=county:CN450270&dl=en&hl=en&q=clar

Federal Stats
http://www.fedstats.gov/qf/states/45/45027.html

OpenDNS

OpenDNS
http://www.opendns.com/

OpenDNS for Schools
http://www.opendns.com/pdf/datasheets/opendns_k12.pdf

Software Vendors